

which is spiked to a post of the porch at the west end of the Mount Tamalpais Tavern. The Tavern is 200 feet lower than the place where the wind vane is mounted and 800 feet southwest from that point. There is an excellent circulation of air about and through the shelter, and at the same time it is shielded from the direct solar rays. The bulbs of the dry and wet thermometers are 5.6 feet above the floor of the porch and about an equal distance below the roof. The wet bulb is arranged for a stationary hygrometer, with cup and wick attached. However, it is always well ventilated, by fanning, whenever a brisk wind is not blowing.

The rain gauge stands at the top of a gently sloping knoll in the broad saddle which separates the eastern peak from the middle peak. It is about 1,000 feet southwest of the eastern peak and 200 feet lower. It is 75 feet west of the pavilion connected with the hotel, the roof of which rises about 20 feet above the gauge.

The barometer is hung 18 inches east of the door of the office, which opens to the northward. There is a small window in the south wall opposite, but the window sill is 5 feet

above the floor, consequently it gives the best light to the opposite side of the room. There is some doubt as to the elevation. The cistern is 4 feet above the bench mark of the railroad at the switch that is distant 50 feet north. This bench mark was found to be 210 feet below the bench of the Coast and Geodetic Survey, which is in the topmost rock of the eastern peak.

This bench mark bears the inscription "Elevation 2,592 feet." This makes the elevation of cistern 2,386. In applying corrections for elevation I have used the following:

Temperature.	Reduced to sea level.
50°	+ 2.48
60°	+ 2.43
70°	+ 2.38
80°	+ 2.33

I find these corrections give a reading 0.02 to 0.08 too high as compared with San Francisco when the temperature on the mountain is as low as that at San Francisco, but the reading is too low by 0.03 to 0.06 when the mountain temperature is 15° to 20° higher than in the city, as is frequently the case.

METEOROLOGICAL TABLES AND CHARTS.

By A. J. HENRY, Chief of Division of Records and Meteorological Data.

For text descriptive of tables and charts see page 448 of REVIEW for October, 1897.

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TABLE I.—Climatological data for Weather Bureau Stations, November, 1897.

Stations.	Elevation of instruments.		Pressure, in inches.		Temperature of the air, in degrees Fahrenheit.						Precipitation, in inches.		Wind.		Maximum velocity.		Total snowfall.																		
	Barometer above sea level, feet.		Thermometers above ground.		Mean actual, 8 a.m. and 8 p.m. + 2°.		Mean reduced.		Departure from normal.		Mean max. and min. + 2°.		Departure from normal.		Mean maximum.		Mean minimum.		Greatest daily range.		Total.		Departure from normal.		Days with 0.1 or more.		Total movement, miles.		Prevailing direction.		Miles per hour.		Clear days.		
	A above ground.		A above ground.		Mean.		Departure from normal.		Mean.		Maximum.		Date.		Mean.		Minimum.		Mean.		Mean.		Mean.		Mean.		Mean.		Mean.		Cloudy days.		Average cloudiness, tenths.		Total snowfall.
New England.																																			
Eastport.	76	69	74	29.90	29.99	+ .02	+ .02	40.9	- 0.8	36.2	- 1.2	55	6	42	8	24	30	27	33	80	6.46	+ 2.4	14	10,638	n.w.	60	ne.	12	6	5	19	7.4	3.7		
Portland, Me.	108	81	89	29.90	30.00	+ .01	+ .02	36.3	- 1.5	57	- 1.5	42	4	24	24	24	24	24	78	5.79	+ 2.7	16	5,860	n.w.	32	ne.	12	6	5	16	8.6	6.1			
Northfield.	872	15	191	29.03	30.06	+ .02	+ .03	41.4	- 1.0	50	- 1.8	50	13	24	24	24	24	24	78	6.69	+ 1.6	16	6,970	n.	34	se.	12	6	5	17	8.8	8.1			
Boston.	125	15	191	29.02	30.06	+ .03	+ .04	45.0	+ 0.4	64	- 0.9	50	21	24	24	24	24	24	78	4.86	+ 1.6	15	5,862	n.w.	46	n.w.	12	10	9	13	8.8	2.5			
Nantucket.	14	43	54	30.06	30.07	+ .00	+ .02	43.4	- 0.9	58	- 1.2	49	17	24	24	24	24	24	78	3.90	+ 0.4	14	10,068	n.w.	39	n.w.	12	10	9	13	5.3	4.3			
Woods Hole.	51	57																			7.84	+ 2.5	12	13,769	w.	60	s.w.	12	10	9	13	6.0	1.2		
Vineyard Haven.	30																				6.42	+ 2.7	14		n.w.	54	n.w.	9	6	5	13	4.1			
Block Island.	27	39	48	30.05	30.06	+ .02	+ .02	44.7	- 1.0	63	- 0.6	50	18	24	24	24	24	24	78	9.42	+ 5.2	16	12,706	n.w.	54	n.w.	9	6	5	11	6.0	1.2			
Narragansett Pier.	10																				8.25	+ 4.1	15		n.w.	54	n.w.	9	6	5	11	6.0	1.0		
New Haven.	107	118	140	29.95	30.07	+ .00	+ .02	41.9	- 0.6	64	- 0.4	49	15	24	24	24	24	24	78	5.72	+ 1.8	15	7,248	w.	42	w.	9	8	7	14	6.2	2.1			
Mid. Atlan. States.																					5.65	+ 0.5													
Albany.	97	84	118	29.98	30.09	+ .02	+ .02	38.9	- 1.7	61	- 0.4	46	12	24	32	34	36	32	81	4.65	+ 1.7	17	6,691	s.	34	w.	12	1	12	17	7.8	4.5			
Binghamton.	875	79	90	29.98	30.09	+ .01	+ .02	38.6	- 1.5	60	- 1.5	45	11	24	31	36	38	30	75	6.69	+ 2.7	16	6,035	w.	36	n.w.	9	2	10	18	7.6	3.6			
New York.	314	298	326	29.75	30.09	+ .01	+ .02	44.1	- 1.6	66	- 1.6	50	21	24	34	38	30	40	75	4.44	+ 0.6	16	10,859	n.w.	54	w.	9	6	5	14	7.1	1.5			
Harrisburg.	877	94	108	29.72	30.14	+ .00	+ .02	43.8	- 1.0	68	- 0.8	50	23	24	37	39	38	32	69	4.09	+ 1.3	14	6,554	w.	48	n.w.	9	2	13	15	7.1	1.0			
Philadelphia.	117	168	184	29.99	30.13	+ .01	+ .02	45.9	- 0.8	71	- 0.5	53	24	24	40	41	36	36	73	4.41	+ 1.2	16	6,998	n.w.	38	n.w.	10	9	8	14	5.6	1.0			
Atlantic City.	52	68	76	30.07	30.13	+ .03	+ .03	46.2	- 0.8	64	- 0.2	53	22	24	40	44	41	36	74	4.04	+ 0.5	11	9,170	n.w.	42	n.w.	10	9	8	14	5.6	T.			
Baltimore.	129	88	93	30.00	30.18	+ .01	+ .01	48.3	- 0.8	75	- 0.5	53	27	24	39	41	35	31	70	3.39	+ 1.4	15	5,462	w.	28	n.w.	10	9	8	14	5.2	T.			
Washington.	112	59	76	30.03	30.15	+ .02	+ .02	46.0	- 0.4	76	- 0.6	55	25	24	37	33	31	29	75	3.31	+ 0.5	14	5,212	n.w.	47	n.w.	10	9	8	14	5.2	T.			
Cape Henry.	55	54	54	29.42	30.17	+ .03	+ .03	54.4	+ 2.3	77	- 0.5	62	34	24	36	39	32	36	68	2.24	+ 0.7	7	3,298	sw.	34	n.w.	12	10	9	14	4.7				
Lynchburg.	685	83	88	29.42	30.17	+ .03	+ .03	53.1	+ 0.9	76	- 0.6	63	32	24	44	49	44	37	77	2.84	+ 0.3	8	6,679	sw.	22	sw.	9	17	7	6	3.5				
Norfolk.	57	88	93	30.11	30.18	+ .06	+ .06	49.1	- 0.5	75	- 0.6	59	28	24	39	34	30	34	84	3.07	+ 0.8	8	4,990	s.			12	10	9	14	5.1				
Richmond.																				1.64	+ 1.4														
S. Atlantic States.																				5.28	+ 1.3														
Charlotte.	773	68	76	29.34	30.18	+ .04	+ .04	57.7	- 1.5	72	* 16	61	28	24	41	36	37	64	79	5.11	+ 1.3	7	5,509	s.	38	s.	20	15	9	19	6.6	4.1			
Hatteras.	11	17	36	30.17	30.18	+ .07	+ .07	56.8	- 1.5	72	* 16	62	41	24	51	51	51	79	92	5.28	+ 1.3	8	11,099	n.	46	n.	23	18	9	19	6.6				
Kittyhawk.	9	12	30																	2.50	+ 2.0	3													
Raleigh.	375	93	101	29.79	30.19	+ .02	+ .02	52.8	- 3.0	75	- 15	63	27	24	42	32	45	39	67	8.48	+ 1.3	5	4,798	sw.	24	sw.	9	10	7	17	7.4				
Wilmington.	78	82	90	30.12	30.20	+ .07	+ .07	56.7	- 0.8	76	- 0.5	68	32	24	42	42	36	30	67	7.15	+ 0.9	4	6,168	s.	29	sw.	9	17	7	17	8.5				
Charleston.	48	60	72	30.16	30.23	+ .10	+ .10	61.8	- 2.9	80	- 6	69	42	24	54	54	49	70	70	0.50	+ 2.5	7	7,454	ne.	34	s.	15	12	9	13	8.8				
Columbia.	5																			1.06	+ 1.3	6													
Augusta.	180	98	108	30.00	30.19	+ .06	+ .06	56.0	- 0.6	80	- 6	70	40	24	52	52	47	50	77	0.71	+ 1.6	5	4,308	w.	26	n.w.	11	18	8	20	4.2				
Savannah.	92	63	86	30.12	30.22	+ .07	+ .07	55.3	- 2.1	81	- 16	74	46	13	57	57	57	55	85	1.56	+ 0.1	7	5,789	sw.	26	n.w.	11	18	8	20	4.2				
Jacksonville.	43	63	84	30.14	30.19	+ .07	+ .07	72.7	- 1.7	75	- 16	74	46	13	57	57	57	55	85	2.84	+ 0.3	8	4,568	n.	36	s.	1	16	9	17	8.5				
Florida Peninsula.																				1.56	+ 2.6														
Jupiter.	28	13	30	30.11	30.14	+ .04	+ .04	73.4	- 1.2	85	* 1	73	58	3	69	18	67	64	76	6.49	+ 3.1	5	8,137	e.	38	ne.	18	10	6	16	5.2				
Key West.	23	42	50	30.11	30.13	+ .07	+ .07	75.6	- 1.4	83	- 16	77	50	13	61	61	61	61	81	1.40	+ 0.9	6	9,396	ne.	36	s.	1	16	9	17	8.9				
Tampa.	36	60	67	30.13	30.17	+ .06	+ .06	69.0	- 2.4	82	- 16	77	50	13	61	61	61	61	81	0.63	+ 1.4	8	4,568	n.	36	s.	1	16	9	17	8.5				
East Gulf States.																				1.56	+ 2.6														
Atlanta.	1,181	92	126	29.00	30.22	+ .05	+ .05	53.2	- 1.4	73	- 14	68	29	20	43	28	35	30	63	82	2.29	+ 1.2	6	7,510	n.w.	32	n.w.	11	17	6	20	3.5			
Pensacola.	56	7																																	

TABLE I.—Climatological data for Weather Bureau Stations, November, 1897—Continued.

Stations.	Elevation of instruments		Pressure, in inches.		Temperature of the air, in degrees Fahrenheit.						Precipitation, in inches.		Wind.																		
	Barometer above sea level, feet.	Thermometers above ground.	Mean actual, &c. m. and s.p.m. + - 2.	Mean reduced.	Departure from normal.	Mean max. and min. + - 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Greatest daily range.	Total.	Departure from normal.	Days with 01, or more.	Total movement, miles.	Miles per hour.	Precip. direction.	Max. velocity.	Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.							
	At above ground.	At above ground.	Mean actual, &c. m. and s.p.m. + - 2.	Mean reduced.	Departure from normal.	Mean max. and min. + - 2.	Departure from normal.	Maximum.	Date.	Mean minimum.	Mean minimum.	Mean relative humidity, per cent.																			
<i>Up. Miss. Val.—Con.</i>																															
Cairo	369	87	98	29.75	30.14	+ .03	49.5	+ 1.1	75	21	58	21	30	35	44	40	77	5.50	+ 1.3	10	7,403	s.	40	w.	26	8	9	18	6.0		
Springfield, Ill.	644	92	92	29.40	30.12	+ .01	41.2	- 2.0	76	20	49	12	29	33	28	36	31	4.94	+ 2.0	11	7,940	s.	30	n.	1	11	10	12	5.7		
Hannibal	534	75	107	29.52	30.14	+ .02	41.8	- 0.1	74	20	52	8	29	31	37	33	40	2.07	+ 0.2	9	7,588	sw.	34	sw.	10	11	8	11	5.5		
St. Louis	567	110	210	29.52	30.14	+ .02	46.1	- 0.1	74	20	55	16	29	37	33	40	34	6.21	+ 3.1	10	7,685	s.	37	w.	8	10	6	14	5.4		
<i>Missouri Valley.</i>																															
Columbia	4	84	84	29.09	30.15	+ .03	48.9	+ 0.6	79	20	54	8	29	31	44	37	30	2.55	+ 0.3	8	6,876	s.	29	sw.	20	9	7	14	6.0		
Kansas City	968	78	95	29.09	30.15	+ .03	48.9	- 0.4	79	20	56	13	29	34	32	37	30	1.25	- 0.9	7	7,068	n.w.	30	sw.	15	13	8	10	4.8		
Springfield, Mo.	1,324	164	108	28.70	30.13	+ .02	45.8	- 0.4	82	20	56	20	29	33	33	38	33	1.77	- 1.8	9	9,091	se.	35	n.w.	8	14	8	11	4.5		
Topeka	81	81	81	28.90	30.12	.00	45.8	- 0.4	82	20	56	5	29	31	39	37	38	0.56	- 0.7	5											
Lincoln	1,199	74	84	28.80	30.13		37.2	- 0.8	73	19	48	2	29	27	37	31	26	70	0.29	- 0.4	4	7,967	n.	40	n.	15	12	11	7	5.0	
Omaha	1,108	92	97	28.90	30.12	.00	38.5	- 2.5	71	19	46	12	29	27	34	31	24	66	0.14	- 0.9	6	5,810	n.	81	n.w.	15	12	5	12	5.0	
Sioux City	1,139	26	164	28.49	30.12	+ .01	29.8	- 4.4	75	19	44	12	29	29	19	47	24	20	0.49	- 0.2	4	9,087	n.	45	n.w.	10	10	8	10	3.8	
Pierre	1,460	50	61	28.49	30.12	+ .01	29.8	- 4.4	75	19	44	12	29	29	19	47	24	20	0.41	- 0.2	6	5,453	se.	39	n.w.	10	10	12	8	5.5	
Huron	1,306	56	67	28.67	30.15	+ .04	27.8	- 3.6	73	19	40	19	29	28	18	35	32	0.67	+ 0.1	5	8,293	n.w.	48	n.w.	10	10	12	8	5.2		
Yankton	1,324	52	58	28.49	30.12		38.9	- 0.7	78	19	44	8	29	28	48	34	34	0.24	- 0.4	6	6,079	sw.	34	sw.	8	13	4	13	5.2		
<i>Northern Slope.</i>																															
Havre	2,494	15	33	27.37	30.14	+ .05	18.2	- 12.6	71	1	27	26	28	10	50	16	13	85	2.08	+ 1.4	12	6,741	sw.	40	sw.	8	5	9	16	6.5	
Miles City	2,372	41	49	27.52	30.18	.00	25.2	- 6.1	76	19	38	17	41	23	19	34	10	1.18	+ 0.8	15	4,854	s.	30	w.	10	8	17	10	6.8		
Helena	4,108	88	93	28.82	30.18	+ .04	28.2	- 4.4	74	19	41	2	29	29	20	47	23	2.22	+ 1.5	14	4,417	sw.	38	n.w.	19	19	5	19	7.3		
Rapid City	3,251	46	50	26.62	30.12	- .02	30.6	- 2.5	73	19	41	17	27	25	17	30	15	1.16	+ 0.8	13	4,890	n.w.	36	n.w.	20	10	12	6	9.9		
Cheyenne	6,105	58	60	28.97	30.11	- .04	37.4	+ 2.0	73	19	50	5	26	26	25	32	15	50	0.68	+ 0.4	7	5,856	w.	54	w.	10	10	14	6	6.8	
Lander	5,372	38	56	28.68	30.13	- .07	34.5	+ 7.5	73	19	47	5	26	23	45	26	20	66	0.44	- 0.4	4	3,146	sw.	30	n.w.	13	13	10	10	5.8	
North Platte	2,826	43	52	27.12	30.17	+ .03	36.4	- 0.9	73	19	49	1	29	24	24	46	24	73	0.85	+ 0.5	4	5,784	w.	33	n.w.	10	13	14	3	4.2	
<i>Middle Slope.</i>																															
Denver	5,290	79	151	24.72	30.14	- .04	40.8	+ 0.8	77	19	54	7	29	28	28	31	21	54	0.24	- 0.4	4	5,595	s.	51	w.	10	4	18	8	5.3	
Pueblo	4,713	74	61	25.26	30.10	- .03	42.8	+ 2.1	80	19	59	9	29	29	29	53	20	51	0.10	+ 0.2	1	4,882	w.	36	w.	20	19	11	11	4.5	
Concordia	1,398	43	47	28.59	30.18	- .01	40.8	- 1.4	79	20	52	5	29	29	29	33	28	74	0.39	+ 0.5	3	4,908	s.	27	n.	15	16	11	16	3.4	
Dodge City	2,504	44	53	27.45	30.18	+ .03	43.0	- 0.7	84	20	59	7	29	28	28	33	25	65	0.06	+ 0.4	2	7,441	s.	37	no.	15	16	11	16	3.2	
Wichita	1,351	78	86	28.65	30.13	- .01	45.8	+ 2.8	80	20	58	7	29	29	33	39	32	60	0.10	+ 0.8	3	7,499	s.	31	n.	28	16	9	15	3.8	
Oklahoma	1,218	54	53	28.62	30.15	+ .03	46.8	- 0.7	78	7	61	11	29	36	36	41	34	66	0.58	+ 1.3	1	9,214	s.	36	n.	28	22	4	4	2.5	
<i>Southern Slope.</i>																															
Abilene	1,749	47	54	28.32	30.18	+ .04	55.3	+ 1.5	84	8	68	20	29	42	40	44	34	52	0.01	- 1.4	1	7,832	sw.	30	w.	4	18	10	2	2.5	
Amarillo	8,691	54	61	26.31	30.14	+ .01	46.8	- 2.1	82	8	62	12	29	33	47	36	50	50	0.32	+ 0.5	2	11,833	s.	46	sw.	25	20	8	2	2.8	
<i>Southern Plateau.</i>																															
El Paso	3,767	10	110	26.27	30.12	+ .01	55.3	+ 3.1	83	21	71	29	30	40	46	41	25	39	T.	0.5	0.5	0	6,845	n.w.	44	w.	26	22	7	1	2.8
Santa Fe	6,998	47	56	25.36	30.16	+ .01	41.4	+ 3.8	68	20	52	5	29	28	28	33	31	19	47	0.08	+ 0.7	2	8,864	se.	30	n.w.	10	22	5	3	3.0
Phoenix	1,076	47	57	28.85	29.09	- .02	60.4	+ 2.8	88	19	77	31	9	44	40	45	30	37	0.00	+ 0.4	0	2,324	e.	19	w.	8	23	5	2	2.4	
Yuma	189	16	50	29.85	30.00	- .02	62.5	+ 0.2	88	2	77	38	28	48	40	33	38	0.00	+ 0.8	3	8,769	n.	24	sw.	7	4	4	2	1.8		
<i>Middle Plateau.</i>																															
Carson City	4,730	82	92	25.83	30.14		47.7	- 1.0	72	1	56	15	26	29	44	34	24	25	51	0.85	+ 0.6	3	5,476	sw.	59	sw.	20	19	14	4	4.5
Winnebucca	4,340	59	70	25.70	30.13	- .07	39.3	- 2.0	72	1	52	5	26	29	52	34	24	25	34	0.38	+ 0.2	5	5,567	sw.	38	w.	7	7	13	10	3.0
Salt Lake City	4,344	88	90	25.71	30.18	- .05	43.2	- 3.2	68	2	53	24	16	34	31	36	33	63	1.19	- 0.2	9	8,567	se.	38	w.	7	7	10	13	6.0	
<i>Northern Plateau.</i>																															
Baker City	8,470	49	55	26.45	30.12	- .06	36.4	- 0.7	65	1	44	16	26	29	30	32	27	72	1.80	+ 0.9	17	4,168	n.w.	86	sw.	19	6	4	20	7.1	
Idaho Falls	4,742	10	56	25.15	30.16	- .06	37.0	+ 6.7	64	12	46	8	26	28	30	32	24	72	1.90	+ 1.0	12	9,048</td									

TABLE II.—*Meteorological record of voluntary and other cooperating observers, November, 1897.*

Stations.	Temperature. (Fahrenheit.)					Precipitation.					Stations.	Temperature. (Fahrenheit.)					Precipitation.					Stations.	Temperature. (Fahrenheit.)					Precipitation.									
	Maximum.			Minimum.		Mean.		Rain and melted snow.					Maximum.			Minimum.		Mean.		Rain and melted snow.						Maximum.			Minimum.		Mean.		Rain and melted snow.				
	Stations.	Maximum.	Minimum.	Mean.	Rain.	Melted	Snow.	Total	depth.	of	snow.	Stations.	Maximum.	Minimum.	Mean.	Rain.	Melted	Snow.	Total	depth.	of	snow.	Stations.	Maximum.	Minimum.	Mean.	Rain.	Melted	Snow.	Total	depth.	of	snow.				
<i>Alabama.</i>												<i>Arizona—Cont'd.</i>	o	o	o	Ins.	T.						<i>California—Cont'd.</i>	o	o	o	Ins.	Ins.									
Alco ^t	81	32	59.4	4.50								Strawberry	71	11	42.8	T.							Drytown	72	30	49.4	1.60										
Asville ^t	81	23	52.6	0.77								Sulphur Spring Valley	85	39	54.6	0.00							Dunnigan ^{*8}	68	33	51.3	0.49										
Bermuda ^t	83	32	59.9	0.88								Texas Hill ^{*8}	79	34	57.3	0.00							Durham ^{*1}	70	33	50.0	1.88										
Birmingham ^t	80	26	56.7	0.84								Tombstone	89	28	60.4	0.00							East Brother L. H.				1.40										
Bridgeport ^t				1.60								Tucson ^c	84	38	61.9	0.04							Edmonton ^{*1}	68	20	39.6	8.17	10.0									
Citronelle ^t	77	37	61.2	2.78								Walnut Grove				0.00							Elsinore	90	30	60.8	T.										
Clanton ^t	75	29	54.0	1.78								Whipple Barracks ^t	78	11	44.8	T.							Escondido	84	21	53.2	0.05										
Daphne ^t	83	33	59.2	2.68								White Hills	81	30	56.5	T.							Fallbrook ^{*1}	87	39	56.4	0.17										
Decatur ^t	78	22	51.1	1.54								Willcox ^{*8}	68	14	44.4	T.							Folsom City ^b	74	31	51.1	1.03										
Demopolis.				2.80								Williams											Fordyce Dam				5.48										
Elba ^t	78	33	57.4	3.31								Arkansas.											Fort Bragg ^t				2.92										
Eufaula ^t	83	33	58.0	2.04								Amity	88	20	52.6	1.88							Fort Ross	70	37	51.8	8.45										
Evergreen.	74	34	56.2	2.95								Arkansas City ^t	79	17	50.8	3.55							Georgetown	73	30	49.5	4.09										
Florence ^t				3.60								Beauregard	80	22	54.4	2.83							Glendora				0.92										
Florence ^t	76	26	51.4	1.88								Camden	82	25	52.2	2.88							Goshen ^{*8}	77	29	49.0	0.20										
Gadsden	77	24	53.0	0.94								Camden b ^t	78	18	48.7								Grand Island ^{*5}	74	33	52.3	0.68										
Greensboro ^t	79	29	55.2	1.73								Canton ^{*1}	83	20	52.9	2.37							Grass Valley				4.86										
Hamilton.	79	24	50.8	1.80								Conway	79	19	52.0	1.81							Greenville ^t	73	14	40.8	6.39	4.0									
Healing Springs ^t	83	23	55.4	2.56								Dallas	79	26	52.0	0.86							Guinda				0.90										
Highland Home ^t	78	33	59.4	0.50								Dardanelle											Healdsburg ^{*1}	68	30	48.4	2.28										
Jasper.	80	21	50.2	0.88								Eaton	80	25	54.6	2.35							Hollister	81	27	50.6	0.46										
Livingston.	78	30	52.6	2.58								Fayetteville ^t	76	17	48.8	1.41							Humboldt L. H.				4.88										
Look No. 4.	74	26	50.3	1.96								Forrest	78	23	53.0	5.80							Hydesville				4.18										
Madison Station ^t	77	22	48.8	1.65								Fulton ^t											Indio ^{*8}	87	30	61.5	0.00										
Maple Grove.				0.75								Hardy	78	18	49.0	2.27							Iowa Hill ^{*1}	73	30	45.6	3.49										
Marion ^t	78	28	57.1	0.84								Helena a ^t	80	26	55.2	4.42							Jackson	74	26	47.7	2.25										
Mount Willing ^t	80	28	58.0	2.66								Helena b ^t	80	24	53.6	3.26							Jolon				0.12										
Newbern ^t	78	29	56.2	1.49								Hot Springs a											Keeler ^{*8}	82	32	54.9	T.										
Newburg.				1.49								Hot Springs (near)											Keene ^{*4}	72	29	47.8	0.00										
Newton ^t	80	32	57.9	1.26								Jonesboro	77	21	49.9	2.70							Kennedy Gold Mine				2.50										
Oneonta.	76	20	51.8	0.82								Keesee Ferry	82	17	50.3	2.60							Kernville				0.00										
Opelika ^t	80	23	57.0	3.29								Lacrosse ^t	74	19	46.6	2.62							King City ^{*8}	78	26	51.1	0.18										
Ozanna ^t	76	25	50.3	1.87								Lono ^e	79	25	50.4	4.12							Kingsburg ^{*3}	75	30	48.1	0.45										
Pineapple.	80	27	56.1	1.78								Luna Landing ^{*8}	78	25	56.5	1.90							Kono Tayee	66	35	49.5	1.64										
Pushmataha ^t	80	31	56.6	0.92								Lutherford ^t	88	24	53.1							Laporte ^{*1}	68	16	37.7	9.34	6.0										
Riverton ^t	79	26	49.6	6.58								Magnolia	83	26	56.8	2.29							Lemon ^e	70	24	48.7	0.18										
Rockmills ^t	79	32	56.4	2.04								Malvern ^t	82	23	49.8	3.79							Lick Observatory	70	29	45.3	1.51										
Scottsboro ^t	79	27	51.9	4.08								Marlanna ^t	78	27	53.0								Lime Kiln	87	33	56.1											
Salma ^t	80	30	56.2	1.56								Marvell	78	26	54.8	4.46							Lime Point L. H.				1.18										
Talladega [*]	72	26	51.3	1.17								Ponticello	80	23	55.1*	3.01							Los Alamos	66	36	49.8	0.00										
Tallassee.				1.97								Moore											Los Gatos ^b														
Tuscaloosa ^t	78	30	56.4	2.48								Mossdale	73	19	47.0	4.34							Lyttown Springs	70	32	49.9	2.15	1.5									
Tuscumbia.	76	33	53.8	1.72								Mount Nebo ^t	75	24	48.8	1.71							Makaloff Mine ^b	73	30	46.8	6.12										
Union ^t	80	26	56.6	1.15								Newport a ^t											Mammoth Tank ^{*8}	87	42	43.7	0.00										
Union Springs ^t	77	33	56.6	3.00								Newport b ^t	80	18	50.2	2.88							Manzana	73	20	45.5	T.										
Uniontown ^t	78	31	57.8	0.85								Newport c ^t	80	20	49.7	3.06							Mare Island L. H.				1.70										
Valleyhead.	77	27	50.6	0.63								Oregon ^{*1}	76	18	46.5								Merced ^{*8}	78	32	50.2	0.17										
Warrior.				1.07		</																															

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>California—Cont'd.</i>																	
Sacramento a	68	32	49.6	0.78	In.	Rangely †	62	12	86.4	0.26	2.5	<i>Georgia—Cont'd.</i>	○	○	○	Ins.	Ins.
Salinas * ^a	70	32	50.6	0.43		Redcliff	57	—2	30.8	1.44	14.4	Belleville	85	37	60.0	1.00	
Salton *	85	42	68.7	0.00		Rico	80	10	41.7	0.19	0.5	Blakely †	78	38	60.6	0.65	
San Bernardino†	86	29	56.6	0.21		Rockyford	75	—2	42.2	0.00		Brag	84	31	64.4	0.28	
San Jacinto	85	26	55.1	0.34		Ruby	59	8	33.9	0.10	1.0	Canton †	—	—	—	—	—
San Leandro * ¹	82	39	55.1	1.21		Saguache †	75	10	36.0	0.00		Cartersville	75	29	52.2	0.98	
San Luis L. H.	—	—	—	0.04		Salida	67	2	38.1	0.50	5.0	Cedartown	76	—	—	—	—
San Mateo * ^a	65	40	53.9	1.00		San Luis †	65	11	38.1	0.20	2.0	Clayton †	73	21	48.3	8.90	
San Miguel * ^a	75	22	51.7	0.08		Seibert	—	—	—	—		Columbus	80	36	57.4	1.13	
San Miguel Island	77	39	56.2	0.00		Smoky Hill Mine	80	7	41.2	0.80	8.0	Crescent	86	38	64.2	0.80	
Santa Ana * ^a	88	38	65.5	0.00		Springfield	70	10	33.0	0.40	4.0	Dahlonega †	78	26	51.0	3.51	
Santa Barbara a	85	41	58.6	0.00		Stamford *	60	—7	30.4	1.50	15.0	Diamond	71	23	48.0	2.68	
Santa Barbara L. H.	—	—	—	0.00		Steamboat Springs	—	—	—	—		Elberton †	77	29	54.8	1.65	
Santa Clara a	78	29	51.7	0.54		Strickler Tunnel	—	—	—	—		Fleming †	70	36	58.2	T.	
Santa Cruz †	78	29	51.7	0.54		Surface Creek †	70	11	39.2	0.45	5.0	Fort Gaines	77	36	57.1	1.47	
Santa Cruz L. H.	—	—	—	0.41		T. S. Ranch †	67	19	40.3	0.86		Franklin	73	33	54.8*	2.49	
Santa Maria	84	31	56.0	0.08		Twin Lakes	—	—	—	—		Gainesville	73	29	50.5	3.46	
Santa Monica * ^a	75	34	61.3	—		Villas	—	—	—	—		Gillsville †	78	27	58.8	1.83	
Santa Paula	83	33	54.5	0.00		Wray †	70	1	38.0	0.07	1.0	Greenbush	74	25	49.4	1.55	
Santa Rosa * ^a	67	34	51.8	2.18		Yuma	—	—	—	—		Hawkinsville	81	26	55.4	0.30	
Saticoy	—	—	—	0.00		<i>Connecticut.</i>	—	—	—	—		Hephzibah * ^a † ^b	73	49	56.4	1.00	
Shasta	—	—	—	2.20		Bridgeport	64	15	42.5	6.40	2.6	Jesup	80	38	60.8	0.78	
Sierra Madre	88	42	60.5	0.82		Canton †	65	5	38.4	6.31	5.0	Lagrange †	80	31	56.4	1.50	
Sneddens Ranch * ¹	70	0	38.6	0.00		Colchester	65	9	41.0	6.18	6.2	Louisville	80	35	58.4	0.50	
S. E. Farallone L. H.	—	—	—	1.05		Falls Village	—	—	—	—		Lumpkin	79	34	59.2	0.31	
Stanford University	67	32	50.6	0.48		Hartford	—	—	—	—		Marietta	74	27	51.2	1.84	
Stockton a	68	30	49.3	0.89		Middletown	68	12	41.6	6.60	6.0	Marshallville	73	34	59.0	0.70	
Summerdale†	64	18	45.0	2.80	4.0	New London †	63	11	41.8	7.85	13.8	Millen	83	42	60.3	2.11	
Susanville†	65	20	48.0	3.18	1.0	Norwalk	68	10	41.1	6.06	3.5	Morgan †	79	34	57.3	1.58	
Sutter Creek * ^a	68	26	44.5	1.92		Southington * ¹	62	11	39.4	5.60	6.0	Mount Vernon	78	41	61.0	1.10	
Tehama *	76	34	50.3	0.56		Storrs	64	5	37.8	7.14	6.5	Newman †	73	30	52.3	2.24	
Templeton * ^a	75	25	47.3	0.00		Voluntown †	64	2	41.0	8.17	7.0	Piscola	80	41	62.8	1.15	
Trinidad L. H.	—	—	—	6.54		Waterbury	67	15	41.9	0.00	3.0	Point Peter	74	27	52.2	3.00	
Truckee * ¹	60	10	39.4	2.20	4.0	West Cornwall †	60	9	37.6	5.54	8.8	Poulan †	84	36	59.8	1.20	
Tulare b	—	—	—	0.35		Windham	62	10	38.4	6.90	6.4	Quitman †	82	36	60.7	1.29	
Tulare c	86	26	51.6	0.26		<i>Delaware.</i>	—	—	—	—		Ramsey	78	25	53.4	1.81	
Ukiah †	72	27	48.2	3.02		Millsboro	72	21	48.7	3.00	T.	Resaca	—	—	—	1.32	
Upper Mattole * ¹	70	36	50.4	5.98		Newark	69	23	48.3	5.88	T.	Reynolds	—	—	—	0.63	
Vacaville * ¹	73	33	51.7	0.07		Seaford	70	28	47.8	2.46	T.	Rome †	76	28	50.8	1.35	
Ventura †	86	33	54.4	0.07		<i>District of Columbia.</i>	—	—	—	—		Talbotton †	75	33	56.0	1.92	
Volcano Springs * ^a	95	39	64.1	0.00		Distributing Reservoir * ³	72	25	46.5	3.51		Tallepoosa	74	27	51.3	1.23	
Walnut Creek	69	81	52.2	1.06		Receiving Reservoir * ³	71	25	46.0	4.77	T.	Thomasville †	81	41	62.2	1.65	
West Palmdale * ¹	72	28	45.6	0.00		West Washington	76	21	44.8	3.61		Toccoa †	77	27	51.4	3.71	
Westpoint	—	—	—	3.61		<i>Florida.</i>	—	—	—	—		Washington †	—	—	—	2.80	
Wheatland †	68	28	48.2	1.64		Amelia †	80	45	64.8	1.69		Whitesburg †	—	—	—	2.40	
Williams * ^a	70	35	51.8	0.52		Archert	82	38	64.5	1.18		<i>Idaho.</i>	—	—	—	—	
Wilmington * ^b	93	39	68.8	0.00		Bartow	85	45	68.5	1.18		American Falls	65	15	39.4	1.86	
Wire Bridge * ^a	77	29	48.8	2.47		Boca Raton †	88	57	73.8	1.35		Blackfoot †	67	15	37.9	0.88	0.5
Yerba Buena L. H.	—	—	—	1.06		Brooksville †	81	48	67.0	1.18		Boise Barracks †	71	19	41.5	2.84	
Yreka †	73	20	40.8	2.94		Carrabelle †	77	41	62.7	T.		Burnside †	58	4	31.5	0.51	
Yuba City * ^a	67	87	49.8	1.80		Clermont †	87	53	69.6	1.18		Coeur d'Alene	59	4	35.9	—	
<i>Colorado.</i>	—	—	—	—		De Funik Springs	81	39	57.0	2.02		Corral * ¹	59	12	34.0	1.98	5.5
Antlers †	64	17	37.8	1.16		Earnestville	84	47	68.0	1.07		Downey	61	13	35.5	0.90	0.5
Arkins	—	—	—	0.82		Estero * ¹	82	53	69.0	0.90		Fort Sherman †	58	2	34.7	8.12	16.2
Boulder	73	10	41.8	0.47	8.2	Eustis †	85	46	67.3	1.22		Gimlet †	55	9	36.8	2.60	9.0
Boxelder	—	—	—	0.83		Federal Point	83	47	65.0	2.39		Gray	71	6	35.6*	—	8.3
Breckenridge †	60	—6	26.2	0.60	6.0	Fort Meade †	87	44	68.2	0.97		Idaho City †	56	10	36.7	2.00	
Canyon †	79	10	44.8	0.20	0.5	Frostproof	88	49	70.5	0.50		Jansenville * ^a	56	10	36.7	2.00	
Castlerock	80	5'	38.4 ^b	—		Gainesville	81	46	64.3	1.08		Kootenai †	59	5	31.0	4.84	31.0
Cheyenne Wells	79	3	39.8	0.10	1.0	Graesmer †	85	48	67.4	1.31		Lakeview	57	9	35.0	8.84	
Cibola	—	—	—	1.16		Haywood	73	42	61.5	2.34		Lewiston	61	18	40.2	4.20	1.5
Colorado Springs †	73	11	40.2	0.19	3.4	Huntington	88	51	66.6	1.78		Lost River	—	—	—	0.46	8.0
Cope	76	8	37.2	0.18	2.0	Kissimmee	—	49	—	0.50		Moscow	50	0	34.4	4.84	
Crook	76	6	40.5	0.15	1.5	Lake Butler	—	—	—	—		Murray †	55	0	32.0	10.98	62.0
Delta	66	18	38.3	0.40	T.	Lake City †	81	44	66.3	0.93		Nampa	73	14	40.6	1.04	0.4
Dumont †	—	—	—	0.20	2.0	Lemon City	86	58	74.4	1.15		Oakley	67	15	39.8	1.12	2.0
Durango	64	18	39.8	0.09	1.0	Lemmon †	84	48	68.4	2.00		Ola †	68	17	37.8	3.89	4.0
Fleming	—	—	—	0.91	5.5	Merritts Island	82	56	71.4	5.99		Payette †	73	17	45.3	0.98	T.
Fort Collins †	76	—3	36.1	0.67		Plant City	86	45	68.6	4.88		Pollock †	68	21	42.4	1.21	
Fort Morgan	70	—5	33.4	0.36	2.0	St. Francis †	85	45	66.2	4.88		Rexburg	68	13	35.0	0.73	
Fox	—	—	—	0.20	2.0	St. Francis Barracks	84	48	66.2	1.98		St. Maries	58	15	36.4	8.78	21.7
Garnett	61	—2	30.0	0.00		Sebastian	87	54	70.5	2.63		Salubria	67	16	38.0	2.78	14.4
Glenavye †	69	10	39.8	0.41	1.5	Switzerland	81	47	63.5	1.73		Soldier †	68	7	34.4	1.73	5.0
Grand Junction †	64	22	41.2	0.38		Tarpon Springs †	85	45	67.4	5.17		Swan Valley †	63	6	33.3	2.46	17.2
Greeley †	75	—3	35.6														

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>Illinois—Cont'd.</i>																	
Cordova	67	8	28.0	1.79	Ins.	Jeffersonville	70	19	47.3	6.19	Ins.	Indianaola	76	—2	40.2*	0.73	T.
Danville	69	11	42.0	5.96	T.	Knightstown†	64	18	41.5	7.98	T.	Iowa City a	81	—2	37.4	1.98	T.
Decatur	71	11	41.6	4.57	T.	Knox	66	18	43.9	3.10	T.	Iowa City b	70	—2	36.8	.....	.....
Dixon†	72	8	38.6	1.90	0.2	Kokomo†	65	15	42.0	6.28	T.	Iowa Fallst.	73	—12	31.0	0.47	.....
Dwight†	69	9	38.6	1.77		Lafayette†	68	11	41.4	.....		Kenosha	71	4	39.6	1.80	T.
East Peoria†	74	10	40.1	2.57	T.	Laporte	65	6	35.4	4.42		Knoxville	73	5	37.5	0.65	1.0
Effingham†	70	15	43.8	4.76		Logansport b†	64	14	39.8	5.57		Lamoni	69	—1	37.9	0.51	.....
Forrest	73	11	42.6	4.56	0.1	Marengo†	70	15	45.5	7.45	T.	Lansing	74	—6	31.2	0.81	2.3
Fort Sheridan†	67	6	36.8	3.58	T.	Marion†	66	11	41.1	5.91	T.	Larrabee†	67	—12	30.8	0.35	2.3
Friendsgrove†						Markie	64	18	38.0	5.10	T.	Leclaire					
Galva†	71	3	37.7	2.00	T.	Mauzy†	63	12	41.2	9.25	T.	Lemars	70	—6	33.2	0.85	2.0
Glenwood*†	66*	12	38.9	4.17	T.	Michigan City* ¹⁰	62	10	40.9	.....		Lenox†	72	—2	36.1	0.93	0.3
Golconda†	74	17	46.6	4.23		Mount Vernon†	78	19	47.9	5.12		Malvern					
Grafton†						Northfield†	67	12	41.6	7.17		Maple Valley	68	0	36.0	1.06	T.
Grayville	73	20	49.8	6.41		Princeton ¹¹	70	18	45.1	6.68		Maquoketa	75	—5	35.6	0.68	0.5
Greenville†	68	14	42.2	7.19		Richmond	65	14	43.2	8.23		Marshall†	73	—14	28.0	0.10	1.0
Griggsville†	74	8	42.6	3.88		Rockport	71	20	48.1	4.06		Mason City	73				
Halliday ¹²	70 ¹³	18 ¹⁴	45.0*	8.65		Rockville†	67	11	42.5	6.10		Millman	66	—2	33.8	0.85	T.
Havana†	73	10	42.4	3.41		Salem	76	18	45.4	5.94		Monticello	76	—4	38.3	1.04	0.5
Hillsboro†	71	14	43.1	5.80		Scottsburg	70	17	46.3	7.18		Moocar	76	4	38.3	1.83	.....
Iron	73	18	47.1	7.22		Shelbyville	64	16	42.0	9.84	T.	Mountayr†	73	—3	30.8	0.92	0.3
Joliet†	73	9	40.5	4.42	T.	South Bend†	66	14	40.5	4.66	1.0	Mount Pleasant ¹³	70	4	39.2	1.64	0.3
Jordans Grove†	73	19	45.7	4.54		Syracuse†						Mount Vernon a ¹⁴	68	3	35.0	0.93	.....
Kankakee a†	65	10	41.4	3.63		Terre Haute†	67	16	43.3	7.10		Mount Vernon b	67	—3	34.2	0.95	0.4
Kishwaukee	67	—2	38.8	1.57	0.5	Topeka†	62	15	39.5	5.22		Newton†	74	—8	31.1	0.88	0.5
Knoxville a	72	4	37.4	2.47		Valparaiso†	66	12	37.5	3.16		North McGregor	72	—9	29.6	0.30	3.0
Lagrange†	67	8	38.4	3.82	1.0	Vevay	70	18	46.9	9.10		Northwood	70	—9	33.2	0.30	1.5
Laharpe ¹⁵	73	4	40.2	1.26		Vincennes†	70	18	44.3	8.45		Odebolt	70	—10	35.0	0.29	1.8
Lanark ¹⁶	68	0	34.8	1.79	T.	Warsaw†	65	11	42.0	5.53	0.5	Ordeon	73	—10	35.0	0.29	2.5
Lexington	69	8	40.4	4.19		Washington†	72	17	47.4	8.42		Osage ¹⁷	70	—10	37.0	0.33	2.5
Loami†						Winamac	67	9	38.2	.....		Oscceola	75	—4	37.0	0.57	T.
Louisville†	70	15	45.2	5.48		Worthington†	68	16	43.8	7.43	T.	Oskaloosa†	75	—2	37.3	0.16	
McLeansboro†	73	17	46.8	5.85		Indian Territory.						Ottumwa	73	—2	39.1	1.11	.....
Martinton†	70	14	43.0	6.01		Healdton†	82	16	53.9	.....		Ovid†	76	—5	36.7	0.54	T.
Mascoutah ¹⁸	72	11	39.7	5.71		Kemp	83	17	55.2	.....		Plover	68	—10	30.8	0.05	0.5
Mattoon ¹⁹	65	12	39.2	4.73		Lehigh†	85	14	53.2	.....		Primghar	63	—14	31.9	0.85	6.5
Minonk†	70	11	38.6	3.92	T.	Purcell†	89	12	53.8	1.35		Red Oak	71	—3	37.4	0.18	1.4
Momonth†	73	2	38.4	1.87		South McAlester†						Rock Rapids	70	—19	28.0	0.25	2.5
Morrisonville†	67	12	41.0	5.29	T.	Tahlequah	79	20	48.7	1.38		Rockwell City	66	—16	28.8	0.11	0.3
Mount Carmel†						Tulsa†	73	20	48.7	1.29		Sac City†	68	—7	31.8	0.20	3.0
Mount Pulaski†	70	11	41.4	3.84	T.	Wagoner	81	16	48.8	1.19		Seymour†	73	—2	38.4	2.03	.....
Mount Vernon	70	13	47.4	4.00		Adair						Sibley	72	—15	30.4	0.20	2.0
New Burnsides†	74	11	47.6	4.07		Afton	71	—3	36.1	0.34	0.5	Sidney	69	—2	35.4	0.26	0.2
Olney a	74	14	45.2	6.57		Albia	81	—3	38.8	0.52	T.	Sigourney	75	—2	36.9	1.37	T.
Oswego ²⁰	65	25	35.9	3.71	T.	Algoa ²¹	71	—11	30.4	0.32	2.8	Spencer	70	—14	29.5	.....	.....
Ottawa†	72	7	38.8	4.37	T.	Alta a†	70	—9	31.0	0.47	3.0	Spirit Lake†	73	—15	30.7	.....	.....
Palestine†	70	14	43.0	6.38		Amana†	69	—3	34.1	0.88	T.	Stuart	70	—4	36.1	0.18	0.5
Paris	66	14	44.4	6.41		Ames b	75	—4	34.2	0.49	T.	Thurman	73	—3	36.2	0.07	T.
Peoria a†						Ames (near)						Villisca†	71	—2	36.0	0.84	0.1
Peoria b†	71	10	40.4	3.48		Atlantic†	72	—4	32.6	.....		Washington	73	—4	35.6	0.35	.....
Philpot	69	9	40.8	5.08		Audubon	68	—7	32.4	0.40	1.5	Washta	73	—7	33.8	0.62	0.5
Plumhill†	73	18	45.3	5.48		Beknap	74	—1	38.2	1.50		Waterloo	72	—8	33.8	0.65	2.0
Rantoul†	70	9	40.0	3.80	T.	Belleplaine	68	—10	30.8	0.94	0.7	Waverly	72	—8	33.2	0.25	2.0
Reynolds	72	1	37.5	1.35	T.	Bonaparte†	76	—1	38.2	1.50		Webster City	70	—8	33.2	0.90	2.0
Robinson†	70	14	44.4	7.95		Britt	74	—17	30.1	0.35	2.8	Westbend ²²	71	—15	26.8	0.74	6.0
Rockford	66	25	32.2	1.73	1.5	Burlington	74	—3	30.4	1.82	T.	West Branch	70	—2	35.0	1.89	T.
Rondongrove†	70	0	36.8	1.40		Charlton	71	—9	32.6	0.25	2.5	Whitten†	71	—8	31.0	2.00	T.
St. Charles ²³	68	5	36.7	3.38	1.0	Corning†	72	—2	37.9	0.18	T.	Wilkinson Junction†	71	—6	36.2	0.56	T.
St. John ²⁴	72	19	45.8	4.70		Council Bluffs	73	—3	38.0	1.09		Winterset†	74	—5	34.6	0.56	.....
Scale Mound	66	—3	33.3	1.15	0.8	Cresco†	71	—13	38.6	0.44		Kansas.					
Streator†	69	11	39.8	4.90	T.	Decorah	70	—11	30.4	0.60	3.0	Abilene†	77	3	42.4	0.23	1.0
Sycamore†	66	2	35.7	3.98	0.2	Delaware ²⁵	70	—4	30.8	1.05		Achilles	75	7	40.4	0.31	T.
Tiskilwa†	69	5	35.7	3.38	T.	Denison†	74	—10	35.8	0.05	0.5	Altcoona ²⁶	75	4	43.8	0.21	T.
Tuscola†	69	10	41.5	5.25		De Soto	70	—2	34.6	0.45	0.7	Atchison†	78	2	42.4	0.23	T.
Walnut†	73	40	4.0	2.27	0.1	Dows	75	—13	31.2	0.56	8.5	Beloit†	76	3	41.4	0.42	T.
Wheaton ²⁷	6	6	38.4	2.97	2.0	Eldora	78	—13	32.8	0.71	2.0	Burlington†	76	3	42.9	0.17	T.
Winchester†	72	8	40.5	8.87		Gardengrove	73	—4	34.8	0.75	T.	Campbell	72	0	40.0	0.68	T.
Winnebago†	69	—1	35.2	1.28	1.0	Glenwood†	71	—3	32.8	0.99	0.5	Chanute	75	0	46.8	0.00	T.
Zion†	68	—8	32.2	1.55	T.	Grand Meadow ²⁸	68	—6	31.5	0.88	2.0	Colby†	78	1	39.4	0.18	T.
<i>Indiana.</i>						Greene	74	—13	32.2	0.52	1.0	Columbus	76	10	45.4	1.23	T.
Anderson†	67	18	42.6	7.47	T.	Greenfield	72	—5	32.8	0.99	T.	Cunningham ²⁹	84	14	45.6	0.06	T.
Angola ³⁰	62	14	38.4	5.50	T.	Hector	78	—13	32.8	0.10	1.0	Dresden ³¹	78	4	47.4	0.15	0.5
Auburn	64	12	39.1	4.23	T.	Hilliard	70	—11	30.0	0.10	T.	Ellinwood†	82	2	42.7	1.00	T.
Bloomington†	68																

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
Kansas—Cont'd.	°	°	°	In.	In.	Louisiana—Cont'd.	°	°	°	In.	In.	Massachusetts—Cont'd.	°	°	°	In.	In.
Lawrence	80	4	42.2	0.72		Donaldsonville †	86	36	68.1	5.08		Fitchburg	67	6	36.9	6.91	6.6
Lebo †	83	2	43.2	0.17		Emilet	81	40	60.6	3.31		Framingham	65	8	40.8	6.45	.....
McPherson	76	0	42.3	0.06		Farmerville	81	26	54.6	2.63		Groton	64	4	36.4	7.77	11.0
Manhattan †	80	4	42.0	0.54		Franklin †	80	40	62.1	4.01		Hyannis †	64	13	45.6	7.96	7.5
Manhattan †	88	4	42.6	0.57		Grand Coteau	80	38	60.6	3.85		Lawrence	60	8	38.4	6.05	1.8
Marion †	77	8	45.8	0.30		Hammond	79	34	56.8	2.56		Lowell a	64	10	38.3	6.49	.....
Meade †	86	10	48.4	0.00	T.	Houma †	86	37	65.5	1.25		Middleboro	67	1	39.8	6.95	8.2
Medicine Lodge †	88	8	44.0	0.02		Jeanerette	85	36	62.2	7.39		Monson	65	4	39.4	7.21	10.0
Minneapolis †	78	2	42.0	0.18		Jennings	85	36	63.1	2.78		New Bedford a	68	11	42.4	9.74	6.0
Morantown †	37	5	44.4	0.33		Lafayette †	84	32	60.9	2.62		Springfield Armory	69	9	40.4	5.15	5.0
Moriand	85	0	39.4	T.		Lake Charles †	87	33	61.9	2.37		Taunton b	68	5	38.0	6.82	7.0
Mounthope †	79	6	43.8	0.22		Lake Providence	89	39	68.7	.....		Westboro †	68	3	38.6	6.55	9.0
Ness City	76 ^a	6 ^a	43.6 ^a	0.00		Lawrence	89	44	64.9	0.98		Worcester b	68	10	38.8	6.92	8.0
Newton	82	5	45.2	0.27		Liberty Hill	86	28	57.5	1.77		Michigan.	.....	.....	.....	.....	.....
Norton	74	2	38.0	0.00		Mansfield †	82	25	56.0	0.75		Adrian	63	14	37.3	4.02	0.2
Norwich †	85 ^a	8 ^a	45.0 ^a	0.08	2.0	Minden	83	32	61.8	4.60		Allegan	60	13	37.8	1.48	1.0
Oberlin †	.....	.....	.....	0.50		Montgomery	84 ^a	29 ^a	56.2 ^a	3.14		Alma	63	15	35.2	2.45	1.5
Olathe †	80	2	42.5	0.84		New Iberia	79	35	60.9	2.80		Ann Arbor	62	14	36.7	4.79	.....
Osage City †	88	1	44.4	0.37		Oakridge †	83	33	68.1	3.04		Arbela	62	14	36.6	3.68	T.
Oswego	79	10	49.7	0.93		Opelousas	84	32	58.8	2.87		Baldwin	64	0	33.3	2.86	5.2
Ottawa	81	4	43.6	0.55		Oxford †	84	34	60.2	5.95		Ball Mountain	60	18	37.0	3.83	0.5
Phillipsburg	68	0	37.6	0.10		Palmcourtlye †	83	27	57.0	1.82		Battle Creek	64	16	38.1	4.08	1-1
Pleasant Dale	82	2	41.4	T.		Plain Dealing †	84	30	57.5	1.75		Bay City b	64	14	38.0	2.30	T.
Pratt	74	18	41.4	0.20	T.	Plaquemine	89	38	63.9	2.02		Benton Harbor	65	18	39.9	4.16	T.
Rome †	80	9	45.4	0.02		Rayne	85 ^b	36	63.6 ^b	5.20		Benzonia	66	18	41.2	.....	.....
Russell	.....	.....	.....	0.41		Robeline	84	23	55.6	4.74		Berlin	61	11	34.5	3.86	1.0
Salina†	75	1	41.6	0.01	T.	Ruston	81	33	57.5	1.42		Berrien Springs	66	17	39.6	5.25	0.5
Scott City	.....	.....	.....	0.00		Schriever	86	34	62.2	2.93		Big Rapids	62	9	39.0	2.49	0.4
Sedan†	81	8	45.8	0.19		Shellbeach	80	40	63.0	3.08		Birmingham	61	12	35.8	5.15	.....
Seneca	80	2	40.4	0.28	T.	Southern University †	83	40	62.0	3.30		Boon	60	3	31.4	2.44	3.8
Sharon Springs †	92	12	42.8	0.40	4.0	Sugar Ex. Station †	80	42	61.2	3.37		Calumet	53	5	27.2	1.18	13.0
Toronto	85	4	44.8	0.35		Sugartown †	82 ^b	38	62.3 ^b	2.14		Camden	62	14	38.0	5.23	T.
Ulysses	85 ^a	2 ^a	38.8 ^a	T.		Venice †	85	32	66.8	0.65		Carsonville	59	15	35.3	3.15	0.1
Viroqua †	80	9	41.7	0.00		Wallace	83	38	62.6	3.13		Charlevoix	67	17	38.8	2.40	11.0
Wallace †	80	6	36.0	0.25	4.0	Whitehall	88	36	52.5	5.75		Cheboygan	57	12	32.9	1.71	9.0
Waumago †	80	4	40.0	0.50		White Sulphur Springs	86	38	59.7	2.45		Clinton	67	15	37.7	5.33	.....
Wellington †	78	10	48.2	T.		.....	81	20	56.8	2.45		Coldwater	62	14	37.8	5.48	.....
Winona †	90	10	46.1	0.00			82	20	52.5	2.45		Crisp * ¹⁰	52	10	38.2	.....	.....
Kentucky.	.....	.....	.....	.....			83	20	59.7	2.45		East Tawas	68	9	38.6	1.14	.....
Alpha	.....	.....	.....	4.18			84	20	57.5	1.75		Eloise	62	14	38.0	5.04	T.
Ashland	72	19	46.4	4.36			85	7	36.8	9.25	9.5	Escanaba †	54	0	30.3	1.50	6.5
Bardstown †	80	20	47.3	4.73			86	7	38.8	5.75	7.0	Ewen	57	-10	26.2	1.75	11.5
Blandville †	72	18	46.8	6.65			87	5	38.0	6.26	8.0	Fairview	61	15	37.6	3.99	T.
Bowling Green a ¹	74	16	45.8	8.23			88	4	33.8	3.96	5.0	Fitchburg	60	10	35.8	6.08	2.5
Bowling Green b †	73	21	48.8	3.15			89	—	31.6	3.10	7.0	Flint	62	14	36.4	3.12	0.2
Burnside †	73	21	48.8	3.32			90	—	31.6	3.10	7.0	Frankfort * ¹⁰	55	20	38.5	.....	.....
Caddo	.....	.....	.....	8.56			91	—	36.5	5.99	6.2	Gladwin	60 ^b	14	38.4	0.85	3.0
Canton †	78	26	49.9	4.03			92	34	28.5 ^b	2.69	8.0	Grand Point au Sable * ¹⁰	55	15	36.6	.....	.....
Carrollton †	68	19	47.0	8.11			93	12	35.4	5.92	8.8	Grand Rapids b	65	11	36.1	2.56	1.4
Catlettsburg * ¹	67	20	44.3	4.83			94	2	34.5	28.9	13.0	Grape	64	16	39.0	4.31	0.5
Earlington * ¹	72	21	48.5	4.83			95	8	34.0	5.79	8.0	Grayling	60	5	31.4	1.39	11.2
Edmonton	72	20	49.0	3.74			96	3	33.2	5.04	6.0	Grindstone City * ¹⁰	58	18	36.4	.....	.....
Ensor	72	19	48.4	4.73			97	24	50.8	4.98		Hammonds Bay * ¹⁰	58	18	34.4	.....	.....
Eubank	74 ^a	14	48.8 ^a	2.34			98	20	50.8	4.98		Hanover	65	12	37.0	5.42	1.8
Falmouth †	.....	.....	.....	8.49			99	22	43.8	8.48	T.	Harrison	64	10	34.6	1.88	6.8
Fords Ferry	76	19	48.7	4.83			100	18	43.6	4.60		Hart	61	14	36.4	2.08	1.6
Frankfort †	78	20	48.8	5.81			101	24	48.5	3.19		Hastings	64	12	36.6	8.07	0.5
Franklin * ¹	72	20	48.6	.....			102	26	47.2	1.73		Hayes	61	16	36.6	1.83	.....
Georgetown	70	16	48.2	.....			103	26	44.4	5.58		Highland Station	61	14	36.4	4.74	T.
Greensburg †	78	17	48.1	3.77			104	24	47.6	4.88		Hillsdale	69	15	37.2	4.92	
Henderson †	74	20	48.6	4.69			105	24	47.6	4.88		Holland * ¹⁰	62	21	40.9	.....	.....
Hopkinsville †	75	21	49.6	3.49			106	24	44.2	4.82		Howell	62	14	36.0	4.04	T.
Irvington	71	18	47.4	5.21			107	5	38.0	5.84	2.0	Humboldt	55	7	24.0	1.19	6.0
Leitchfield †	72	17	45.6	4.35			108	24	45.9	3.40		Ionia	64	14	36.4	2.53	T.
Loretto	74	12	47.8	3.72			109	23	44.2	5.85		Iron River	58	17	29.2	1.24	11.0
Lyndon	76	16	47.4	4.06			110	23	44.4	5.82		Ivan	60	11	33.4	1.69	6.7
Marrowbone †	76	16	47.4	4.34			111	24	44.7	5.15		Jackson	63	16	37.8	4.68	0.3
Middleboro †	71	16	46.6	2.98			112	24	45.0	5.15		Jeddo	60	14	36.0	0.93	0.2
Mount Hermon	73	18	49.2	3.75			113	28	48.6	6.20	2.0	Kalamazoo	63	14	39.2	4.01	3.5
Mount Sterling †	69	18	46.2	4.70			114	20	43.8	4.07		Lake City	68	10	34.0	.....	2.0
Owensboro †	75	21	49.2	4.60			115	20	42.6	4.75		Lansing	63	14	36.4	3.18	1.0
Owenton †	67	16	45.8	9.29			116	24	45.4	4.96		Lapeer	64	14	36.6	0.06	0.5
Paducah †	78	21	49.4	5.74			117	25	42.8	4.84		Lathrop</					

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
Michigan—Cont'd.						Minnesota—Cont'd.						Missouri—Cont'd.					
Owosso	65	13	36.8	2.79	Ins.	Willmar†	68	-18	26.4	0.10	1.0	Mexico†	77	4	42.0	2.75	
Parkville	61	17	40.8	4.85	2.5	Worthington	73	-11	29.3	0.43	2.3	Mineralspring	75	13	47.2	1.73	
Pentwater * ¹⁰	61	17	33.8	2.37	10.0	Zumbrota ¹	68*	-16	28.8	.....	.....	Montreal ^{*1}	76	12	44.2	2.88	
Petoskey	58	17	37.4	2.37	T.	Agricultural College	78	26	55.0	0.73		Mount Vernon	80	15	49.8	3.04	
Plymouth	63	17	37.2	4.91	T.	Batesville†	79	25	52.0	2.89		Neosho	75	14	48.6	1.78	T.
Point Au Barques * ¹⁰	64	12	37.4	.....		Bay St. Louis	80	39	61.5	4.39		Nevada [*] 6	79	9	44.8	0.69	
Point Betsey * ¹⁰	55	17	37.5	.....		Bloxit†	78	29	60.6	1.67		New Haven [*] 1	73	12	46.8	3.46	
Port Austin	64	17	37.0	1.48	T.	Briers	75	28	57.2	1.52		New Madrid	78	21	52.0	4.78	
Reed City	63	10	32.0	2.59	1.4	Eurokhaven†	83	28	58.6	3.03		New Palestine ^{*+1}	74	10	45.3	2.42	
Rockland	65	-5	26.0	2.77	18.6	Canton†	81	28	57.6	1.80		Oakfield	74	13	45.4	5.94	
Rogers City	58*	11	38.5	1.97	.....	Columbus a†	80	26	55.0	2.18		Oakmound	.....	.....	.....	3.03	
Romeo	61	13	37.6	4.33	T.	Columbus b†	80	26	52.8	6.44		Oakridge [*] 4	74	24	42.2	3.48	
Saginaw	65	10	35.4	2.75	T.	Corinth	76	25	57.6	1.88		Olden†	76	14	45.2	1.59	
St. Ignace	52	11	31.7	1.66	8.0	Crystal Springs†	80	27	57.6	1.88		Oregon a	81	2	40.8	0.61	T.
St. Johns	66	13	37.4	2.55	.....	Edwards	80	30	57.2	1.29		Oregon b	80	0	41.2	0.45	
Sandbeach ^a	63	15	36.6	1.50	.....	Enterprise	81	29	58.1	0.97		Osceola†	.....	.....	.....	2.65	
Ship Canal * ¹⁰	52	10	29.8	.....		French Camps	80	23	58.9	1.61		Oto	.....	.....	.....	2.00	
Sidnaw	56	-10	26.4	1.75	13.5	Greenville a	75	29	58.1	8.67		Palmyra [*] 5	76	6	41.4	2.82	
Somerset	63	18	36.0	4.87	2.0	Greenville b†	82	27	55.2	2.96		Phillipsburg ^{*+1}	74	12	45.0	2.10	
South Haven	66	11	34.8	1.72	0.5	Greenwood	78	25	54.0	1.00		Pickering ^{*3}	74	-3	36.8	0.40	T.
Stanton	66	11	34.8	1.72	0.5	Hattiesburg†	79	23	58.6	1.42		Platte River ^{*2}	74	3	36.6	1.39	
Sturgeon Point * ¹⁰	56	14	36.0	.....	Hazlehurst†	80	29	56.7	0.80		Poplar Bluff	76*	17 ⁴	49.2	4.93		
Thomaston	56	-10	24.8	2.36	18.0	Holly Springs†	76	24	49.7	3.99		Potosi	71	5	39.2	5.07	
Thornville	60	15	37.6	3.31	1.0	Jackson†	80	28	54.6	8.17		Princeton	79	0	39.6	1.82	
Thunder Bay Island * ¹⁰	60	18	36.5	.....	Jake†	76	29	51.7	0.98		Rhinelander	76	14	45.0	3.50		
Traverse City	52	6	31.0	.....	Leakesville†	85	33	61.0	2.29		Richmond	80	4	42.4	2.13		
Two Heart River * ¹⁰	52	10	34.0	4.09	.....	Logtown†	80	39	61.8	3.60		Rolla	.....	.....	.....	3.16	
Valley Center	60	10	34.0	4.09	.....	Louisville†	81	24	55.4	1.36		St. Charles	74	14	43.9	4.74	
Vandalia	65	15	38.9	4.98	0.7	Macon†	73	26	54.6	1.11		St. James [*] 3	74	15	42.8	0.62	
Vassar	64	12	36.8	1.88	T.	Magnolia†	88	33	57.4	3.08		St. Joseph†	75	15	43.8	5.23	
Vermillion Point * ¹⁰	50	4	27.6	.....	Mayersville	80	29	56.0	1.08		St. Louis	75	10	40.2	2.17	T.	
Waskepi	61	12	38.4	4.74	1.0	Meridian†	81	29	58.5	1.70		Sarcocoe [*] 3	75	11	43.8	1.51	
Waverly	64	10	36.3	4.06	1.6	Natchez†	84	32	60.4	3.76		Sedalia†	74	14	42.2	2.07	
West Harrisville	66*	14*	35.4	0.75	0.7	Okolona†	78	25	53.1	2.50		Shellina	74	20	46.5	5.16	
Wetmore	55	-3	27.4	3.76	30.0	Palo Alto	80	25	54.5	0.76		Sikeston	76	20	43.5	2.17	
White Cloud	62	12	32.8	2.68	1.5	Pontotoc†	88	24	56.8	2.07		Steffenville	76	6	43.9	1.62	
Ypsilanti	64	14	38.2	5.80	0.6	Port Gibson†	88	26	57.6	3.37		Stellada†	74	2	38.6	1.43	T.
Minnesota.						Rosedale†	80	25	50.0	.....		Trenton	73	3	40.8	1.56	
Adat.	59	-15	21.2	0.04	0.2	Stonington [*] 1	80	30	58.0	.....		Vichy	75	11	43.1	5.05	T.
Albert Lea	72	-11	30.2	0.49	4.5	Tupelo†	.....	.....	Virgil City	76	10	41.9	2.57				
Alexandria†	63	-11	26.6	0.78	3.0	University	78	25	53.5	1.30		Warrenton	76	10	41.9	4.31	
Beardsley	67	-13	26.0	0.71	2.5	Water Valley [*] 1	78	30	59.7	2.35		Wheatland	76	10	43.5	4.03	
Bird Island	71	-17	27.7	0.53	3.0	Waynesboro ^b †	79	33	59.7	4.31		Willow Springs	76	10	43.5	2.21	
Blooming Prairie†	67	-13	27.8	0.35	3.5	Wayneville†	78	25	58.8	2.53		Zettonia [*] 1	82	20	49.1	2.67	
Bonnwell	60	-12	29.4	0.58	7.0	Yazoo City†	84	26	55.8	2.53		Montana.					
Caledonia†	68	-10	30.5	0.68	3.0	Missouri—Cont'd.						Bigtimber	70	-17	29.9	1.88	19.3
Camden	73	-11	28.1	0.75	6.0	Appleton City	78	7	46.0	1.62		Billings	70	-20	26.6	2.44	13.5
Collegeville	62	-2	29.2	0.35	.....	Arthur [*] 3	74	10	41.2	1.05		Bozeman†	68	-12	28.8	.....
Crookston†	54	-12	20.8	0.30	T.	Avalon	77 ⁴	1*	39.0	1.76		Bozeman Exper. Stat'n.	66	-9	29.8	.....
Detroit City	60	-18	21.5	0.30	T.	Bethany	76	1	39.6	1.28		Butte†	66	-4	30.4	1.52	10.5
Faribault	74	-14	29.3	0.40	4.0	Conception	75	3	39.8	0.27		Castie	61	-9	27.4	1.88	18.8
Farmington†	70	-16	24.8	0.80	6.0	Cowgill [*] 6	74	2	39.4	1.68		Chinook†	55	-22	16.2	1.85	17.0
Fergus Falls†	56	-10	25.0	0.28	1.6	Dobek†	76	5	40.8	2.26		Columbia Falls	55	-14	28.9	10.04	47.0
Glencoe	71	-15	28.8	0.39	.....	Brundt	76	5	48.4	2.18		Deer Lodge	67	-11	28.0	1.53	10.6
Glenwood	60	-13	25.1	1.03	1.0	Carrollton†	78	7	48.4	2.18		Fort Benton	77	-25	25.8	1.10	11.0
Grand Meadow†	70	-12	26.8	0.38	5.0	Conception	75	3	39.8	0.27		Fort Keogh†	75	-27	25.4	0.98	9.8
Koochicking	53	-22	18.8	0.73	4.5	Cowgill [*] 6	74	2	39.4	1.68		Fort Logan†	66	-27	25.8	2.59	.....
Lake City	71	-11	30.0	0.29	5.0	Darksville†	70	5	39.6	2.30		Fort Missoula	68	2	32.4	2.80	9.3
Lakeside†	72	-17	26.8	0.41	4.0	Downing†	.....	.....				Glasgow	73	-30	17.2	0.68	.....
Lake Winnibigoshish	54	-13	20.7	0.41	3.5	East Lynne [*] 3	10	41.8	1.13			Glendive†	72	-17	25.4	1.00	10.0
Lambert†	50	-18	20.0	0.10	1.0	Edgehill [*] 5	70	16	48.1	4.21		Glenwood	61	-13	25.7	2.71	27.0
Leech Lake	59	-13	24.4	0.24	1.9	Eightmile [*] 1	78	5	42.6	1.13		Greatfalls†	68	-23	25.7	1.55	14.1
Lesieur [*] 1	68	-12	28.9	0.45	3.5	Elidon [*] 1	79	10	42.9	3.40		Hogan†	59	-20	21.2	2.14	21.0
Long Prairie	60	-10	25.0	0.52	2.2	Elmira	79	0	42.6	1.38		Kipp†	67	-35	18.0	5.51	30.9
Lutzen	48	-6	25.8	0.87	.....	Emma [*] 3	8	40.2	1.11			Lewistown	71	-24	25.4	3.97	42.5
Luverne†	79	-13	29.8	1.00	3.5	Fairport†	.....	.....				Livingston†	67	-5	32.1	1.66	14.0
Lynd.	73	-15	27.4	1.01	6.9	Farmersville	.....	.....				Manhattan†	65	-16	28.0	0.44	4.5
Mapleplain	68	-8	29.7	.....		Fayette	80	6	48.8	1.98		Martinsdale†	65	-10	28.6	3.15	20.5
Maplewood [*] 1	68	-8	20.4	0.58	4.5	Fulton†	.....	.....				Marysville†	65	-9	27.4	2.53	21.0
Milan†	73 ^d	-20 ^d	24.14	0.97	4.9	Gallatin ^a †	78	2	41.0	1.81		Poplar	71	-25	20.2	1.10	10.0
Minneapolis ^a	60	-10	25.5	0.97	4.9	Glasgow	78	4	42.2	1.66		Radersburg	.....	.....	.....	1.28	
Minneapolis ^b ¹	68*	-10	26.7	0.87	5.2	Gordonville [*] 3	19	14	44.2	2.59		St. Ignatius Mission	64	0	34.4	4.04	10.8
Minnesota City [*] 1	70	-10	31.2	0.83	4.0	Gorin	.....	.....				St. Pauls†	.....	.....	.....	1.13	

TABLE II.—*Meteorological record of voluntary and other cooperating observers*—Continued.

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Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>South Dakota—Cont'd.</i>																	
Oelrichs †	74	-7	29.4	2.70	27.0	Texas—Cont'd.	74	0	61.1	0.38		Vermont—Cont'd.	74	0	51.9	5.5	
Parker †	73	-16	28.9	0.95	3.0	Danevang †	88	31	54.8	0.42	St. Johnsbury	56	6	33.6	5.5		
Parkston †	67	-14	29.4	0.20	1.0	Dublin †	81	23	54.8	0.42	Strafford †	52	7	27.8	5.35		
Plankinton †	70	-15	27.2	0.35	5.0	Duval †	82	35	62.8	0.03	Vernon †	59	2	35.8	3.6		
Redfield	74	-14	28.0	0.18	3.0	Emory	84	21	56.2	0.03	Wells	58	0	34.1	6.59	17.0	
Rooxford	70	-11	27.1	1.87	9.0	Estelle †	82	18	53.7	0.55							
Shiloh	68	-15	25.9	T.		Forestburg †	83	20	53.1	0.22	<i>Virginia.</i>						
Silver City				1.87	18.5	Fort Brown	88	43	65.7	3.03	Alexandria	74	24	44.8	3.44		
Sioux Falls †	73	-13	28.8	0.44	2.5	Fort Clark	86	4	60.7	0.00	Ashland †	80	22	49.5	3.47		
Spearfish †	74	-6	29.0	0.83	9.8	Fort McIntosh	95	38	66.6	0.00	Barboursville	73	21	45.7	2.16		
Tyndall †	73	-7	33.4	0.48	4.0	Fort Ringgold †	94	34	68.0	1.70	Bedford City	75	21	48.3	2.52		
Vermillion	78	-19	22.8	0.10	1.0	Fort Stockton	87	25	55.4 ¹	0.10	Bigstone Gap †	71	15	44.2	1.31		
Watertown	68	-18	25.0	0.20	2.0	Fort Worth	80 ^a	30 ^b	57.2 ^c	0.20	Birdsnest †	78	33	51.2	2.05		
Wentworth †	76	-13	27.4	0.46	2.2	Fredericksburg †	85	21	54.4	T.	Blacksburg	71	18	43.5	1.34		
Wessington Springs	71	-14	26.8	0.80	6.0	Gainesville	88	20	54.1	0.43	Buckingham †	75	17	45.2	3.47		
						Georgetown †	80 ^d	31	57.2 ^e	0.10	Burke's Garden						
<i>Tennessee.</i>						Goliard					Callaway †	75	19	49.4	3.19		
Andersonville	75	21	48.4	2.08		Grapevine †	83	21	55.2	0.26	Christiansburg						
Arthur				1.74		Hale Center	84	20	52.1	T.	Clarksville						
Ashwood †	78	26	51.1	2.55		Hallettsville †	85	34	61.7	0.81	Clifton Forge	71	19	43.6	2.64	T.	
Benton (near) †				0.91		Haskell	91 ^f	19	55.2 ^g	0.26	Dale Enterprise	71	14	43.4	2.40		
Bluff City †				1.42		Hewitt					Dowell	75	18	45.8	2.57		
Bolivar †	76	23	49.7	4.05		Houston †	84	38	62.2	1.08	Dwale						
Bristol †	78	17	45.6	0.69		Huntsville †	81	32	58.2	1.78	Farmville	77	22	49.9	1.50		
Byrdstown	74	20	49.0	3.85		Jacksonville	85	27	58.3	0.94	Fredericksburg †	77	23	47.1	1.99		
Cagle	75	20	48.4	2.87		Junction City †	83	31	60.9	0.00	Grahams Forge	70	13	40.3	1.34		
Carthage †				3.92		Kerrville	84	22	56.2	0.15	Guinea						
Clarksville	76	23	50.2	3.06		Lampasas †	88	23	56.2	0.08	Hampton	72	22	53.2	2.36		
Charleston				1.98		Llano †	83	30	59.3	T.	Hot Springs	70	18	44.2	2.02	T.	
Clinton				1.95		Longview †	85	29	55.8	1.93	Leesburg	72	20	46.2	2.94		
Covington	77	25	51.6	3.77		Luling †	84	34	61.4	0.78	Lexington †	76	18	46.0	2.44		
Decatur †	74	23	49.5	2.87		Marshall	88 ^a	30 ^b	57.9 ^c	0.97	Maidens						
Elizabethhton †	77	18	48.4	1.72		Menardville	91	19	54.4	0.00	Manassast	75	22	46.6	4.34		
Elk Valley	74	20	49.8	2.70		Midland					Marion †	70 ^f	15	43.7 ^f	1.55		
Erasmus				3.03		Mount Blanco †	85	15	61.2	0.40	Monterey	66	10	39.6	4.10	T.	
Fairmount †	68 ^a	25	47.0 ^a	2.53		New Braunfels	85	32	60.5	0.38	Nottoway	78	18	50.8	4.05		
Florence †	76	23	49.6	3.63		Panter					Petersburg †	76	23	50.8	2.78		
Franklin	75	24	50.2	3.36		Paris †	81	24	54.7	0.70	Richmond (near) †	76	21	49.4	4.37		
Grace				3.29		Point Isabel †	86	54	70.1	1.80	Rockymount †	74	20	50.3	2.22		
Greeneville †	73	20	48.5	1.46		Rheinland †	89	20	55.4	0.24	Salem †	79	23	51.0	1.25		
Harriman	71	21	47.4	2.64		Roby	88	12	54.5	0.30	Speers Ferry						
Hickory Withe	75	24	52.2	6.90		Runge †	93	36	65.4	0.00	Spottsville †	76	24	50.5	3.25		
Hohenwald †				5.08		Sanderson †	85	22	54.4	0.25	Standardsville †	73	17	45.0	2.68		
Jackson †	77	23	50.0	3.10		San Marcos †	84	29	59.6	0.38	Staunton †	72	19	47.2	2.14	T.	
Johnsville †	77	20	50.6	3.48		Sulphur Springs †	82	22	57.8	0.77	Stephens City †	73	20	44.8	3.79		
Jonesboro †	74	23	45.5	2.24		Temple †	80	29	56.4	0.98	Sunbeam †	72	25	48.3	2.84		
Kingston †				2.23		Tulsa	84	8	49.6	0.00	Warrenton	68	28	46.4	2.84		
Liberty †	76	24	51.0	3.38		Tyler	84	29	55.4	0.91	Warsaw †	72	22	49.4	2.65		
Lynville †	75	24	50.2	4.41		Valentine †					Westbrook Farm	75	24	48.6			
McKenzie †	77	23	50.6	4.06		Waco †	82	26	57.4	T.	Woodstock †	70	20	43.1	2.20	T.	
McMinnville †	73	24	48.8	3.05		Waxahachie †	80	22	52.5	0.40	Wytheville †	71	19	47.2	1.36	T.	
Mollino †	75	23	51.0	3.16		Weatherford †	80	16	43.0	0.85	<i>Washington.</i>						
Newmarket				1.64		Wichita Falls †	83	23	54.3	0.88	Aberdeen	57	30	43.1	16.91		
Newport †	74	20	48.6	1.40						Anacortes				5.01	0.5		
Nunnally				3.74						Ashford †				19.19	27.0		
Oak Hill †	76	23	48.8	4.16						Blaine †	58	10	34.0	7.01	3.0		
Palmetto †	76	24	52.7	8.38						Cascade Tunnel	50	4	39.8		131.0		
Peyear	74	20	49.2	4.14						Centerville †	71	16	39.0	8.11	11.0		
Pope				4.28						Chehalist	63	30	44.2	11.68	4.0		
Riddleton †	76	23	50.0	3.57						Clearwater	31			23.88	1.0		
Rogersville †	72	20	47.6	1.82						Colfax †	62	25	42.1	5.93	16.4		
Rugby	72	18	45.4	2.17						Coupeville †	57	25	42.1	4.42	8.0		
St. Joseph †	79	23	50.4	4.47						Dayton †	72	6	39.3		30.0		
Savannah	77	25	51.8	4.88						Elliensburg	63	26	34.5	3.92			
Sewanee †	70	25	48.9	2.84						Ellensburg (near)	66	10	34.5	4.93	14.0		
Silver Lake				1.35						Fort Smokey †	65	8	37.3	5.47	17.0		
Springdale †	74	19	46.4	1.55						Fort Spokane	63	8	32.8	5.10	28.0		
Sylvia				0.00						Grandmound †	60	8	42.9	13.18	2.8		
Tellico Plains †	76	20	50.2	3.49						Hunters †	57	5	38.6	4.90	20.5		
Tracy City	76	21	51.4	1.97						Kennewick †	78	16	42.5	3.88	2.0		
Trenton	70	23	47.1	3.89						La Center	62	30	43.0	18.78	3.0		
Trenton	75	20	49.5	4.32						Lakeside	59	9	34.2	2.98	15.5		
Tulahoma †	72	23	48.8	3.50						Lapush	55	28	43.2	14.94	T.		
Union City †	79	21	49.8	4.17						Loomis †	50	2	31.9	0.85	2.0		
Waynesboro	77	23	51.2	4.06						Madrone †	64	26	42.0	9.05			
Wildersville	77	24	50.6	4.22						Mayfield †	63	28	43.6	14.87			
				0.65						Moxee Valley †	70	9	40.0	3.11	14.1		
Arthur City †				0.00						New Whatcom	63	20	42.2	5.74	3.0		
Austin a				57.6						Northbend	62	26	40.7 ^d	22.07 ^d	5.0		
Austin b [†]	80	81	57.6	0.11						Olga	54	24	39.6	49.2			
Ballinger †	87	26	57.5							Olympia †	60	24	43.4	13.01	T.		
Beeville †	92	34	64.6	T.						Pinehill †	69	20	41.5	6.84	18.0		
Blanco †	84	88	68.3	0.25						Pomeroy	64	15	37.6	4.74	8.0		
Boerne †	83	84	59.3	0.13						Port Townsend	60						

TABLE II.—*Meteorological record of voluntary and other cooperating observers—Continued.*

Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.		Stations.	Temperature. (Fahrenheit.)			Precipita- tion.	
	Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.		Maximum.	Minimum.	Mean.	Rain and melted snow.	Total depth of snow.
<i>West Virginia—Cont'd.</i>	°	°	°	Ins.	Ins.	<i>Wisconsin—Cont'd.</i>	°	°	°	Ins.	Ins.	<i>Oregon.</i>	°	°	°	Ins.	Ins.
Bluefield †	70	15	47.2	1.43	6.19	Two Rivers * ¹⁰	58	2	34.6	.....	.....	Fort Klamath	74	14	43.4	1.16	1.8
Buckhannon †	.....	.....	.....	6.19	0.8	Valley Junction †	70	-13	30.4	1.25	6.5	Texas.	.....	.....	.....	.....	.....
Buckhannon b.	78	15	42.7	.....	.....	Viroqua	66	-8	31.3	0.98	4.8	Gainesville	91	39	67.6	2.57	.....
Burlington †	70	17	43.8	8.84	T.	Watertown †	62	-7	32.4	1.56	6.0	Missouri City	96	45	75.4	5.10	.....
Charleston †	.....	.....	.....	4.07	.....	Waukesha †	68	-2	33.6	1.25	0.9	Vermont.	.....	.....	.....	.....	.....
Dayton †	70	17	43.4	3.78	.....	Waupaca †	62	-13	30.3	1.64	8.0	Woodstock	.....	.....	.....	.....	1.06
Eastbank	76	21	48.6	2.95	T.	Wausau †	58	-10	26.9	0.97	7.0						
Elkhorn †	71	18	49.1	0.92	.....	Wausaukee	58	-4	28.8	1.43	6.0						
Fairmont †	.....	.....	.....	6.35	T.	Westbend	60	-2	31.8	1.54	6.1						
Glenville †	72	16	43.9	6.00	.....	Westfield †	61	-9	30.1	1.28	4.0						
Grafton †	74	16	43.2	4.89	0.5	Whitehall	67	-20	28.1	1.17	6.6						
Green Sulphur	76	18	45.8	1.04	.....	White Mound †	69	-6	32.2	1.33	2.0						
Harpers Ferry †	.....	.....	.....	5.56	.....											
Hinton a †	.....	.....	.....	1.00	.....											
Hinton b †	71	18	46.2	.....	T.												
Huntington	72	17	46.0	5.02	.....											
Kingwood	65	13	43.4 ⁴	7.15	15												
Marlinton †	68	18	39.7	4.08	1.0												
Martinsburg	71	20	41.9	4.70	.....											
Morgantown b †	73	15	44.9	5.24	T.												
New Martinsville †	72	17	45.4	6.69	.....											
Oldfields †	70	17	42.0	2.93	T.												
Point Pleasant †	72	18	45.6	6.40	T.												
Powellton	73	21	47.0	2.92	.....											
Romney	69	21	44.0	4.56	T.												
Rowlesburg †	.....	.....	.....	6.70	1.0												
Upper Tract	76	20	46.0	.....	.....										
Weston a	.....	.....	.....	6.71	.....											
Weston b †	72	20	44.4	.....	T.												
Wheeling b †	69	18	45.4	6.98	T.												
<i>Wisconsin.</i>	.....	.....	.....	.....	.....							
Amherst	65	-14	29.5	1.40	6.0												
Barron	59	-16	28.0	0.29	2.9												
Bayfield	55	-1	27.8	1.05	2.5												
Beloit	64	-3	34.8	1.05	2.2												
Brodhead	68	-3	33.2	1.36	1.0												
Butternut	69	-19	25.6	1.25	11.2												
Chilton	63	-5	32.4	1.86	1.8												
Citypoint	64	-10	29.4	1.16	6.5												
Crandon	75	-11	32.0	1.63	12.2												
Delavan	65	-7	34.0	1.74	1.0												
Dodgeville †	68	-6	30.8	1.77	1.7												
Easton	67	-18	30.4	1.40	9.5												
Eau Claire	64	-11	28.6	0.92	7.0												
Florence †	57	-6	26.8	1.71	11.0												
Fond du Lac	61	-4	33.4	2.28	6.5												
Grand River Locks	.....	.....	.....	1.21	4.0												
Grantsburg †	68	-12	27.2	1.04	7.0												
Gratot	66	-2	33.1	0.60	T.												
Hartford	58	-7	29.3	1.76	7.0												
Hartland	65	0	34.2	1.81	0.8												
Harvey	65	-3	34.0	2.08	4.4												
Hayward	48	-18	25.4	1.32	11.2												
Hillsboro	67	-10	30.2	1.62	5.5												
Kenosha * ¹⁰	58	-3	34.7	.....	7.0												
Koepenick *†	62	-8	30.0	1.00	.....											
Lancaster †	60	-5	31.0	1.82	1.5												
Lincoln †	61	-4	32.2	1.64	6.0												
Madison †	61	0	33.1	1.88	3.1												
Manitowoc †	58	0	33.0	1.98	2.5												
Meadow Valley †	69	-14	29.3	1.08	5.0												
Medford †	68	-16	27.0	0.68	0.4												
Mensana	.....	.....	.....	1.25	6.0												
Nellsville †	64	-14	27.4	1.82	8.0												
New London	61	-8	30.4	2.00	4.5												
Oconto	60	-3	31.8	2.29	6.5												
Osceola †	66	-25	26.2	1.39	9.0												
Pepin	70	-12	29.9	0.80	5.0												
Pine River †	64	-8	31.0	1.73	8.7												
Portage †	63	-4	30.0	1.08	4.0												
Port Washington	68	-3	34.8	1.69	6.5												
Prairie du Chien	70	-4	37.3	0.96	0.5												
Racine	66	3	37.4	1.92	0.5												
Sharon	65	5	31.8	1.54	0.5												
Shawano	60	-7	30.6	1.29	3.0												
Sheboygan * ¹⁰	64	-4	35.3	.....	.....										
Spooner †	64	-14	26.7	1.50	15.0												
Stevens Point †	66	-12	29.2	1.17	5.2												
Sturgeon Bay Canal * ¹⁰	53	4	32.5	.....	.....										

EXPLANATION OF SIGNS.

* Extremes of temperature from observed readings of dry thermometer.

† Weather Bureau instruments.

A numeral following the name of a station indicates the hours of observation from which the mean temperature was obtained; thus:

¹ Mean of 7 a. m. + 2 p. m. + 9 p. m. + 4.² Mean of 8 a. m. + 8 p. m. + 2.³ Mean of 7 a. m. + 7 p. m. + 2.⁴ Mean of 6 a. m. + 6 p. m. + 2.⁵ Mean of 7 a. m. + 2 p. m. + 2.⁶ Mean of readings at various hours reduced to true daily mean by special tables.⁷ Mean from hourly readings of thermograph.⁸ Mean of 7 a. m. + 2 p. m. + 9 p. m. + 3.⁹ Mean of sunrise and noon.¹⁰ Mean of sunrise, noon, sunset, and midnight.

The absence of a numeral indicates that the mean temperature has been obtained from daily readings of the maximum and minimum thermometers.

An italic letter following the name of a station, as "Livingston a," "Livingston b," indicates that two or more observers, as the case may be, are reporting from the same station. A small roman letter following the name of a station, or in figure columns, indicates the number of days missing from the record; for instance, "14" denotes 14 days missing.

No note is made of breaks in the continuity of temperature records when the same do not exceed two days. All known breaks, of whatever duration, in the precipitation record receive appropriate notice.

CORRECTIONS.

Arizona, October, 1897, make Benson read Casa Grande.

Iowa, Portsmouth, October, 1897, make precipitation read 1.41.

Michigan, Berlin, October, 1897, make precipitation read 1.67.

Nebraska, Creighton, October, 1897, make precipitation read 2.10.

Ohio, Waverly, February, 1897, make mean temperature read 38.0. Carrollton, make precipitation read 2.73.

Norwalk, March, 1897, make precipitation read 3.44. Logan, June, 1897, make precipitation read 1.51.

Milfordton, make mean temperature read 64.4. Fayetteville, August, 1897, make mean temperature read 71.2.

Carrollton, September, 1897, make mean temperature read 64.8.

Texas, Forestburg, January, 1897, make precipitation read 2.27. Graham, make maximum temperature read 69.

Stafford, make mean temperature read 49.4. Cuero, March, 1897, make minimum temperature read 35. Camp Eagle Pass, April, 1897, make minimum temperature read 50. Cuero, make minimum temperature read 41. Fort McIntosh, make maximum temperature read 96. Childress, May, 1897, make mean temperature read 67.0. Bremond, June, 1897, make mean temperature read 82.0. Camp Eagle Pass, make minimum temperature read 68.

October, 1897, Table III, Canadian data, make mean reduced pressure at Hamilton, Bermuda, read 30.04.

Title of Chart VI, Review of October, 1897, for "depth of snow on ground at the close of the month," read "total snowfall during the month."

Page 449, second column, last line, for "depth of snow on ground at the close of the month," read "total snowfall during the month."

TABLE III.—Data from Canadian stations for the month of November, 1897.

Stations.	Pressure.			Temperature.		Precipitation.		Prevailing direction of wind.	Total depth of snow.
	Mean not reduced.	Mean reduced.	Departure from normal.	Mean.	Departure from normal.	Total.	Departure from normal.		
St. Johns, N. F.	Inches.	Inches.	Inches.	°	°	Inches.	Inches.	n.	5.4
Sydney, C. B. I.	29.68	29.63	— .10	35.4	— 1.1	6.12	.....	n.	5.4
Halifax, N. S.	29.89	29.95	— .01	36.4	— 0.7	4.66	— 0.95	n.w.	10.0
Grand Manan, N. B.	29.88	30.01	+ .01	37.3	— 0.1	6.04	— 0.82	w.	0.9
Yarmouth, N. S.	29.93	29.97	— .06	37.0	— 1.9	8.15	+ 3.92	w.	1.4
Charlottet'n, P. E. I.	29.90	29.94	— .08	39.0	— 0.9	7.40	+ 4.46	n.w.	5.1
Chatham, N. B.	29.94	29.96	— .02	39.8	— 1.2	6.78	+ 3.86	n.w.	3.2
Father Point, Que.	29.94	29.97	+ .01	27.7	— 1.2	5.97	+ 3.51	n.	86.5
Quebec, Que.	29.62	29.96	— .05	27.6	— 1.4	8.24	— 0.68	w.	12.7
Montreal, Que.	29.80	30.02	— .00	30.0	— 1.6	5.03	+ 1.86	sw.	18.6
Rockliffe, Ont.	29.45	30.03	+ .08	26.2	— 2.4	2.80	— 0.35	se.	6.2
Kingston, Ont.	29.70	30.02	— .02	35.3	+ 0.3	2.81	— 0.61	ne.	....
Toronto, Ont.	29.64	30.08	— .08	37.0	+ 1.4	8.86	+ 0.91	sw.	1.7
White River, Ont.	28.64	30.07	+ .08	16.6	— 3.9	2.22	+ 0.38	w.	22.2
Port Stanley, Ont.	29.40	30.05	— .00	37.7	+ 0.9	4.59	+ 1.44	w.	2.7
Saugeen, Ont.	29.28	30.01	— .01	35.7	+ 0.7	8.04	— 0.86	n.w.	9.4
Parry Sound, Ont.	29.28	30.00	— .02	31.8	— 0.8	8.26	— 0.95	e.	18.7
Port Arthur, Ont.	29.38	30.06	+ .08	21.6	— 2.4	1.06	— 0.92	w.	4.9
Winnipeg, Man.	28.22	30.12	+ .04	18.1	— 4.9	0.73	— 0.27	w.	7.2
Minnedosa, Man.	28.24	30.16	+ .12	12.8	— 5.0	0.68	— 0.18	w.	6.2
Qu'Appelle, Assin.	27.73	30.18	+ .10	9.7	— 9.1	1.14	+ 0.54	n.w.	11.4
Medicine Hat, Assin.	27.71	30.16	+ .12	18.6	— 13.8	3.11	+ 2.78	s.	31.1
Swift Curr't, Assin.	27.43	30.18	+ .12	12.6	— 10.6	1.50	+ 0.99	w.	14.6
Calgary, Alberta. ....	.....	.....	.....	.....	.....	.....	.....	.....	....
Prince Albert, Sask.	28.51	30.14	.....	8.8	— 6.6	1.83	.....	w.	18.3
Edmonton, Alberta.	27.89	30.18	+ .16	11.2	— 11.7	1.10	+ 0.88	n.w.	10.0
Battleford, Sask.	28.30	30.16	.....	8.6	— 5.1	1.10	.....	w.	11.0
Kamloops, B. C.	28.61	29.91	.....	26.4	.....	2.43	.....	sw.	21.5
Hamilton, Bermuda.	30.00	30.16	+ .11	68.3	— 0.4	1.49	.....	ne.	....
Banff, Alberta.	25.26	30.15	.....	11.2	.....	3.58	.....	sw.	26.5
Esquimalt, B. C.	29.96	29.99	.....	40.8	— 0.8	7.29	.....	n.	0.8
Ottawa, Ont.	29.69	30.06	.....	28.0	— 8.7	2.77	.....	n.w.	6.8

TABLE IV not received.

TABLE V.—*Mean temperature for each hour of seventy-fifth meridian time, November, 1897.*

Stations.	Mean.																								
	1 a.m.	2 a.m.	3 a.m.	4 a.m.	5 a.m.	6 a.m.	7 a.m.	8 a.m.	9 a.m.	10 a.m.	11 a.m.	Noon.	1 p.m.	2 p.m.	3 p.m.	4 p.m.	5 p.m.	6 p.m.	7 p.m.	8 p.m.	9 p.m.	10 p.m.	11 p.m.	Midnight.	
Bismarck, N. Dak.	20.6	20.0	18.6	17.6	17.3	16.1	15.8	16.0	15.2	16.7	19.9	23.3	26.8	29.2	31.1	31.9	31.6	29.7	26.4	24.4	22.9	23.5	21.3	20.5	
Boston, Mass.	39.9	39.7	39.3	39.1	38.6	38.3	38.2	38.8	40.0	41.3	43.0	44.4	45.4	46.0	45.5	44.8	43.7	42.7	42.1	41.7	40.7	39.7	39.1	41.6	
Buffalo, N. Y.	40.0	39.5	39.5	39.8	38.9	38.9	38.6	38.0	39.0	40.3	41.1	41.6	41.9	41.8	41.8	41.8	41.2	40.5	40.9	39.8	39.9	39.6	39.8	40.2	
Chicago, Ill.	38.4	37.9	37.3	36.8	36.4	35.8	35.4	35.6	35.4	36.0	37.5	39.1	40.2	40.9	41.5	41.1	41.8	41.3	40.8	40.5	39.8	39.0	38.6	38.6	
Cincinnati, Ohio	45.8	45.0	44.5	44.1	43.8	42.7	42.3	42.3	42.4	45.2	45.5	46.5	47.8	48.8	49.8	50.2	50.8	49.4	47.4	46.7	46.2	45.4	45.1	45.9	
Cleveland, Ohio	41.2	41.2	41.0	40.7	39.9	38.8	39.4	39.4	39.7	40.3	41.1	42.0	42.6	42.2	42.8	44.0	42.8	43.4	42.9	42.3	41.5	40.9	41.0	40.6	
Detroit, Mich.	37.7	37.4	36.9	36.9	36.5	36.4	36.5	36.6	37.1	38.3	39.3	40.2	40.6	41.2	42.0	41.8	41.3	40.5	39.8	39.5	39.0	38.7	38.1	38.8	
Dodge City, Kans.	37.0	36.0	34.9	34.1	33.5	32.5	31.1	30.1	29.7	28.8	28.5	28.9	27.9	27.6	27.5	28.1	28.4	28.6	28.3	28.0	28.7	28.0	28.4	28.8	
Eastport, Me.	35.5	35.3	35.0	34.7	34.5	34.4	34.4	34.5	35.1	36.0	36.5	37.4	37.8	38.0	37.8	37.5	37.1	36.7	36.8	36.1	35.6	35.3	35.3	35.9	
Galveston, Tex.	64.6	64.4	64.2	63.9	63.2	63.0	62.5	62.2	62.3	63.0	64.4	65.3	66.1	66.9	67.5	67.6	67.8	67.2	66.4	65.9	65.6	65.4	65.0	64.7	
Havre, Mont.	17.4	17.0	17.1	16.4	16.5	15.9	15.7	15.5	15.2	14.8	15.0	16.8	18.7	19.8	20.4	20.7	21.8	21.4	20.4	19.4	18.5	17.9	17.4	16.6	
Kansas City, Mo.	41.1	40.4	39.9	38.6	38.3	37.8	37.2	38.5	38.3	39.5	41.2	42.9	44.6	44.8	50.3	50.8	51.0	50.1	48.5	47.6	45.2	44.0	43.8	41.8	43.1
Key West, Fla.	74.2	74.1	74.0	73.7	73.8	73.8	74.0	74.5	75.7	76.3	77.0	77.4	77.5	77.5	77.6	77.1	76.6	75.8	75.3	75.2	74.7	74.6	74.8	74.1	75.4
Memphis, Tenn.	51.2	50.1	49.7	49.0	48.0	47.8	47.0	46.7	46.9	49.0	51.3	53.7	55.5	57.2	58.7	59.7	59.9	58.7	56.9	55.4	54.2	53.2	52.8	51.3	52.6
New Orleans, La.	60.3	59.9	59.8	58.8	58.4	57.7	57.8	57.8	58.8	61.8	65.1	67.6	69.0	69.9	69.8	69.7	69.0	67.1	64.9	63.4	63.5	61.6	61.2	60.7	63.0
New York, N. Y.	43.9	42.4	42.0	41.8	41.5	41.7	41.7	41.9	42.5	43.5	45.1	46.3	46.5	47.6	46.9	46.4	45.6	44.9	44.5	43.5	43.2	42.7	42.4	43.8	
Philadelphia, Pa.	48.8	48.3	48.2	48.2	48.2	48.2	48.1	48.0	44.5	46.1	47.6	49.1	50.2	50.7	50.3	49.3	48.4	47.4	46.7	45.6	45.1	44.8	43.6	45.9	
Pittsburgh, Pa.	45.7	43.2	42.9	42.3	41.9	41.9	42.4	42.4	42.9	44.5	46.1	47.2	47.8	48.4	48.4	47.9	47.0	46.2	45.5	44.9	44.4	43.8	43.0	44.9	
Portland, Oreg.	44.8	44.2	43.5	43.5	43.2	43.1	42.6	42.2	42.3	42.0	41.8	41.5	42.1	42.7	43.9	45.2	46.2	46.7	47.2	47.6	46.5	45.8	45.0	44.1	
St. Louis, Mo.	44.6	44.5	43.8	43.3	42.4	41.8	40.8	40.3	40.5	42.1	43.9	45.3	46.2	46.7	47.2	47.6	46.5	46.8	45.5	45.0	44.7	44.5	44.1	45.7	
St. Paul, Minn.	27.5	26.9	26.2	25.8	25.4	24.9	24.5	24.6	24.4	25.0	26.7	28.9	31.2	33.7	34.8	34.9	34.9	34.2	32.6	31.6	30.2	29.8	28.3	27.2	28.8
Salt Lake City, Utah	40.6	40.0	40.0	39.0	38.6	38.5	38.5	38.9	39.3	38.0	37.9	39.1	41.9	41.6	47.0	48.1	48.7	48.1	46.5	44.0	45.0	41.9	40.8	41.0	42.3
San Diego, Cal.	56.8	56.4	55.8	55.5	54.8	54.3	53.8	53.8	53.4	53.7	56.2	60.9	61.2	63.9	66.0	66.2	66.1	65.2	64.0	62.1	60.9	59.7	58.3	57.7	59.2
San Francisco, Cal.	53.2	51.5	51.0	50.8	50.1	49.8	49.6	49.4	49.3	48.9	49.1	50.2	51.6	52.8	54.8	55.9	56.7	57.1	56.3	54.4	53.9	53.5	52.9	52.4	52.2
Savannah, Ga.	57.5	56.8	55.9	55.2	54.3	54.0	53.2	54.5	57.6	61.6	65.0	67.4	68.7	69.8	68.7	66.6	64.4	62.8	61.6	60.8	59.7	58.6	57.7	60.9	
Washington, D. C.	42.3	42.6	41.9	41.7	41.3	41.1	41.1	42.2	44.3	46.8	48.4	49.7	51.1	52.1	52.4	51.8	50.6	49.1	47.7	46.3	45.2	44.4	43.6	43.1	45.9

TABLE VI.—*Mean pressure for each hour of seventy-fifth meridian time, November, 1897.*

Stations.	Mean.												Midnight.												
	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.		
Bismarck, N. Dak.	28.275	.274	.270	.273	.268	.266	.271	.270	.275	.284	.289	.294	.293	.281	.288	.280	.283	.272	.280	.284	.286	.287	.288	.278	
Boston, Mass.	29.592	.900	.895	.895	.903	.910	.920	.929	.930	.920	.914	.901	.889	.888	.897	.890	.898	.903	.904	.906	.907	.906	.905	.904	
Buffalo, N. Y.	29.188	.189	.189	.188	.185	.181	.190	.188	.194	.196	.193	.183	.173	.170	.175	.179	.185	.193	.199	.199	.202	.199	.197	.198	
Chicago, Ill.	29.163	.163	.163	.164	.168	.174	.181	.191	.197	.203	.207	.200	.187	.177	.164	.164	.165	.167	.169	.171	.175	.173	.170	.168	
Cincinnati, Ohio	29.444	.442	.444	.440	.443	.444	.453	.464	.474	.478	.483	.478	.451	.437	.431	.431	.434	.439	.444	.445	.450	.451	.451	.450	
Cleveland, Ohio	29.226	.291	.230	.215	.218	.222	.226	.234	.245	.246	.247	.240	.234	.216	.212	.213	.220	.227	.231	.232	.234	.233	.232	.229	
Detroit, Mich.	29.253	.250	.247	.244	.242	.245	.248	.260	.267	.268	.271	.266	.253	.245	.241	.245	.251	.259	.263	.266	.266	.261	.259	.256	
Dodge City, Kans.	27.466	.464	.455	.456	.449	.446	.449	.454	.462	.468	.471	.468	.446	.429	.409	.402	.406	.412	.421	.431	.439	.447	.454	.459	.445
Eastport, Me.	29.886	.892	.890	.889	.888	.892	.903	.913	.916	.915	.901	.888	.880	.876	.876	.876	.881	.886	.887	.885	.886	.882	.881	.880	
Galveston, Tex.	30.104	.100	.096	.096	.096	.099	.108	.119	.134	.141	.144	.137	.118	.099	.088	.077	.074	.077	.086	.096	.103	.108	.110	.110	
Havre, Mont.	27.355	.363	.367	.371	.377	.378	.382	.384	.388	.384	.389	.401	.404	.387	.374	.382	.388	.391	.394	.395	.395	.390	.385	.373	
Kansas City, Mo.	29.100	.100	.102	.103	.101	.102	.105	.109	.115	.120	.121	.116	.116	.093	.070	.058	.061	.062	.061	.063	.070	.078	.085	.089	
Key West, Fla.	30.101	.092	.085	.082	.083	.089	.102	.117	.120	.126	.130	.114	.098	.077	.069	.064	.066	.078	.088	.088	.103	.111	.115	.116	
Memphis, Tenn.	29.731	.730	.730	.730	.733	.734	.753	.769	.778	.778	.784	.764	.746	.723	.715	.711	.714	.719	.726	.730	.735	.739	.741	.740	
New Orleans, La.	30.113	.110	.106	.106	.110	.120	.131	.146	.160	.185	.160	.145	.120	.099	.087	.080	.083	.089	.100	.111	.119	.125	.125	.124	
New York, N. Y.	29.745	.747	.744	.741	.743	.746	.754	.764	.769	.768	.752	.736	.731	.711	.709	.714	.720	.725	.729	.733	.742	.749	.752	.740	
Philadelphia, Pa.	29.585	.583	.586	.583	.587	.590	.600	.606	.611	.606	.596	.577	.562	.550	.552	.554	.554	.556	.566	.573	.579	.583	.583	.583	
Pittsburgh, Pa.	29.190	.191	.198	.198	.197	.196	.195	.198	.207	.207	.213	.201	.185	.174	.172	.179	.186	.193	.199	.203	.198	.196	.193	.194	
Portland, Oreg.	29.897	.902	.906	.906	.908	.908	.903	.890	.886	.887	.893	.901	.907	.911	.902	.895	.888	.883	.882	.877	.880	.884	.887	.891	
St. Louis, Mo.	29.500	.496	.501	.502	.503	.507	.513	.525	.535	.549	.551	.552	.548	.517	.501	.488	.482	.493	.488	.488	.493	.497	.501	.505	
St. Paul, Minn.	29.168	.169	.171	.176	.170	.170	.167	.167	.173	.176	.176	.171	.155	.139	.128	.123	.127	.138	.139	.146	.150	.154	.158	.162	
Salt Lake City, Utah	25.712	.713	.711	.713	.710	.707	.707	.709	.716	.726	.739	.747	.747	.731	.717	.706	.700	.708	.703	.709	.709	.706	.701	.714	
San Diego, Calif.	29.981	.981	.975	.973	.967	.963	.959	.961	.968	.977	.950	.005	.008	.982	.968	.951	.983	.984	.985	.989	.948	.952	.965	.971	
San Francisco, Calif.	30.012	.018	.016	.014	.016	.016	.014	.016	.017	.025	.039	.048	.051	.046	.048	.046	.049	.051	.051	.051	.051	.051	.051		
Savannah, Ga.	30.099	.097	.095	.096	.099	.107	.120	.129	.139	.144	.137	.118	.088	.073	.065	.065	.070	.079	.069	.069	.102	.105	.109	.101	
Washington, D. C.	30.012	.012	.013	.012	.016	.019	.027	.038	.043	.045	.036	.010	.988	.977	.978	.981	.985	.996	.008	.016	.020	.024	.019	.021	

TABLE VII.—Average wind movement for each hour of seventy-fifth meridian time, November, 1897.

Stations.	1 a.	2 a.	3 a.	4 a.	5 a.	6 a.	7 a.	8 a.	9 a.	10 a.	11 a.	12 a.	13 a.	14 a.	15 a.	16 a.	17 a.	18 a.	19 a.	20 a.	21 a.	22 a.	23 a.	24 a.	Midnight.	Mean.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
Abilene, Tex.	9.4	10.0	9.8	9.5	9.5	9.1	9.8	9.6	9.9	10.9	13.0	13.7	14.3	13.8	13.6	14.0	13.2	10.8	8.4	8.6	8.9	9.2	9.2	10.9		
Albany, N. Y.	8.8	8.8	8.9	8.7	8.5	8.5	8.8	9.0	9.2	9.7	9.9	10.7	11.5	11.4	11.0	10.6	9.8	9.2	8.9	9.0	8.9	8.8	8.0	9.3		
Alpena, Mich.	9.8	10.6	10.3	10.3	9.9	9.7	9.4	10.1	11.2	11.4	12.1	12.5	12.6	12.5	12.8	11.9	11.0	10.9	11.2	11.5	10.8	11.2	10.6	11.2		
Amarillo, Tex.	16.8	16.4	15.8	15.8	15.9	16.2	14.4	15.1	14.0	14.5	16.4	17.5	18.1	18.4	18.8	19.4	19.6	18.6	15.4	15.0	15.1	15.5	15.0	16.8	16.4	
Atlanta, Ga.	10.4	9.8	9.7	9.8	10.1	10.2	10.3	10.4	10.2	10.6	11.2	11.9	12.5	11.6	11.6	11.2	10.3	8.5	8.9	10.4	10.8	10.3	10.1	10.4		
Atlantic City, N. J.	12.0	11.4	11.9	11.8	11.9	11.7	10.7	11.5	13.5	14.6	15.2	15.3	15.8	15.0	14.9	14.1	12.6	11.3	12.2	11.2	11.3	12.0	12.8	11.9	12.7	
Augusta, Ga.	4.8	4.7	4.8	4.8	4.2	4.5	4.1	4.5	5.5	5.5	6.6	7.9	8.6	9.6	9.3	9.8	9.0	7.8	5.9	5.3	4.9	4.7	4.2	4.4	4.8	6.0
Baker City, Oreg.	5.1	5.0	5.8	6.6	6.5	6.7	6.3	6.6	6.8	6.4	6.2	6.6	5.8	6.1	6.5	5.4	6.0	6.1	5.6	4.5	4.8	4.0	4.8	4.9	5.8	
Baltimore, Md.	4.1	4.8	8.9	4.1	8.7	8.1	3.7	4.4	5.0	5.0	6.0	6.1	6.1	6.8	6.6	5.4	4.7	4.4	4.8	4.0	4.2	3.9	4.3	4.8		
Bismarck, N. Dak.	5.4	5.8	5.9	6.0	5.9	6.5	6.7	6.1	6.9	9.0	9.9	11.4	12.7	12.9	12.8	10.5	8.5	7.4	7.1	6.5	6.8	5.8	8.0			
Block Island, R. I.	19.4	18.6	18.1	18.2	17.9	16.5	15.8	16.4	16.6	16.8	15.7	16.9	17.0	16.7	16.4	17.0	17.6	17.6	18.7	18.4	19.5	19.7	19.2	17.6		
Boston, Mass.	12.3	12.0	11.8	11.5	11.4	11.1	11.5	11.7	12.2	13.0	18.0	12.6	18.1	18.4	18.3	12.5	11.8	11.3	11.9	11.2	11.6	11.6	11.7	12.0		
Buffalo, N. Y.	20.1	20.4	20.5	21.0	20.0	19.9	19.1	18.5	18.7	18.8	18.8	19.5	18.8	18.8	19.1	19.1	17.8	17.6	17.5	17.8	17.7	18.7	19.2	19.0		
Cairo, Ill.	10.6	10.6	10.7	10.1	9.9	9.5	9.7	9.2	9.6	10.8	10.7	11.6	11.5	11.3	12.1	9.7	9.7	10.2	9.7	9.7	9.5	9.1	10.3			
Cape Henry, Va.	15.7	15.5	15.7	15.4	14.4	14.4	14.5	14.2	14.7	15.0	14.9	15.1	15.2	15.2	15.9	14.8	13.9	13.5	13.5	14.2	15.0	15.7	16.1	14.9		
Carson City, Nev.	7.9	7.1	7.5	6.6	5.3	5.2	4.9	4.5	5.1	4.7	5.1	5.1	6.1	8.5	10.0	10.9	11.6	11.7	10.3	10.5	9.8	7.6	7.8	8.9	7.6	
Charleston, S. C.	9.8	9.6	9.9	10.1	9.9	10.1	9.7	10.1	10.6	10.5	11.1	11.7	12.1	11.9	11.9	11.2	9.7	9.6	9.3	9.0	9.5	9.7	9.7	10.4		
Charlotte, N. C.	7.1	7.6	7.4	6.9	6.9	6.5	6.4	6.5	7.4	8.5	8.9	9.6	10.1	10.7	9.2	8.0	6.6	6.6	6.9	6.7	7.2	7.1	7.8			
Chattanooga, Tenn.	5.7	5.8	5.8	6.2	5.9	5.9	5.4	5.5	5.8	6.7	7.5	9.5	10.3	10.8	11.0	10.6	10.3	8.8	7.9	7.3	6.3	6.0	5.8	7.8		
Cheyenne, Wyo.	9.9	9.9	10.4	11.1	11.6	10.5	10.6	11.6	12.1	12.0	14.1	15.6	16.4	14.9	14.8	12.0	9.8	10.4	10.2	10.0	10.1	11.9				
Chicago, Ill.	20.1	19.4	19.8	19.6	19.1	19.1	19.1	18.9	20.0	19.7	20.2	20.3	20.9	19.1	19.2	19.7	19.8	20.3	20.1	20.7	20.8	20.7	20.5	19.9		
Cincinnati, Ohio.	7.1	7.1	7.8	7.0	7.8	7.0	7.3	8.5	9.0	10.1	10.2	10.5	10.8	10.1	9.7	8.7	8.0	7.4	7.2	7.2	7.3	7.2	8.3			
Cleveland, Ohio.	20.4	19.9	19.6	19.1	18.3	19.1	20.1	19.2	18.8	18.4	18.7	18.6	18.3	18.2	18.6	18.6	19.6	19.8	19.3	19.7	20.1	19.1				
Columbia, Mo.	8.5	8.9	8.6	9.0	9.1	9.0	9.3	9.5	9.7	10.1	10.5	11.8	11.4	11.5	10.4	8.7	8.0	8.1	8.9	8.9	8.4	8.9	9.6			
Columbus, Ohio.	7.6	7.8	7.3	7.7	8.2	8.1	7.7	7.8	8.2	9.4	10.6	10.4	10.5	10.4	9.9	8.5	8.0	7.9	7.8	8.1	8.6	7.9	8.6			
Concordia, Kans.	6.3	6.8	7.0	6.8	6.4	6.1	5.9	6.2	6.8	7.8	8.2	8.9	8.8	8.7	8.9	8.3	8.3	5.3	5.4	5.7	5.6	6.1	6.1	6.9		
Corpus Christi, Tex.	8.4	8.3	8.1	8.5	8.1	7.9	8.7	9.1	9.7	10.8	10.5	10.9	12.4	12.9	12.8	13.5	12.7	12.0	10.4	9.5	8.8	8.0	10.2			
Davenport, Iowa.	6.9	6.6	7.3	6.9	6.8	7.3	7.4	7.4	7.6	7.7	8.7	9.2	10.1	10.2	10.1	9.9	8.5	7.7	7.0	6.8	6.3	6.7	7.9			
Denver, Colo.	7.6	7.5	7.6	7.2	7.9	8.0	8.4	8.4	9.2	9.5	10.4	11.0	11.4	11.5	10.4	8.7	8.0	7.5	6.1	6.7	6.4	6.2	7.0	7.8		
Des Moines, Iowa.	7.2	6.9	7.0	6.8	6.6	6.8	7.0	7.4	7.8	8.2	10.0	11.3	11.8	11.3	11.2	8.8	7.8	8.1	8.3	7.7	7.8	7.4	8.5			
Detroit, Mich.	7.8	7.5	7.8	8.1	8.8	7.9	8.0	8.1	7.8	8.9	9.1	9.1	9.4	8.9	9.0	9.1	8.6	7.9	8.0	8.3	8.1	7.9	8.0	8.3		
Dodge City, Kans.	8.8	8.3	9.0	8.9	8.7	8.8	8.2	8.4	8.0	10.0	12.4	12.8	13.6	14.3	13.8	13.2	12.1	9.4	8.7	9.7	9.0	9.4	10.3			
Dubuque, Iowa.	6.8	6.9	6.8	7.3	7.3	7.2	6.8	6.8	7.4	8.1	8.2	8.9	9.8	10.0	9.7	9.6	8.9	7.5	6.8	6.9	7.0	6.6	6.5	7.7		
Duluth, Minn.	10.9	10.4	10.6	11.8	11.2	11.0	10.8	10.4	9.7	8.9	9.3	9.2	9.8	10.2	10.8	9.8	8.8	8.6	8.8	9.7	10.3	11.1	11.8	10.1		
Eastport, Me.	12.5	12.3	12.5	13.0	13.7	14.3	15.6	16.8	17.0	17.3	17.4	17.7	16.0	15.7	14.9	14.8	14.0	14.2	13.4	14.0	13.4	13.5	14.8			
El Paso, Tex.	7.9	7.4	7.5	7.2	7.0	7.7	7.8	7.9	7.7	8.8	9.3	10.3	11.0	11.4	13.2	13.9	12.4	10.7	9.6	9.7	10.5	9.2	8.3	9.5		
Erie, Pa.	15.9	16.0	15.4	15.2	15.0	14.8	14.4	15.2	16.0	15.7	15.6	16.1	15.7	15.7	14.5	13.9	13.8	13.8	14.6	15.5	15.5	16.4	16.0	15.8		
Eureka, Cal.	3.5	3.8	3.6	3.6	3.7	3.8	4.4	4.4	4.7	4.4	4.2	4.2	4.7	5.5	6.2	6.4	6.0	5.2	4.9	4.4	4.0	4.7				
Fort Canby, Wash.	14.7	15.8	15.2	15.6	16.8	16.8	16.8	17.6	18.1	18.1	18.4	19.0	19.2	19.7	19.1	18.6	18.1	15.3	14.9	15.0	14.4	14.9	16.3			
Fort Smith, Ark.	6.1	6.6	7.4	7.7	7.6	7.7	7.7	7.8	8.4	9.4	9.2	10.1	9.4	9.5	10.1	9.4	8.0	6.5	6.1	5.7	6.0	5.9	7.7			
Fresno, Cal.	4.5	4.3	3.9	4.1	3.9	3.9	4.5	4.0	3.8	3.4	3.1	3.4	4.6	5.3	5.4	4.6	4.4	4.2	4.1	4.2	3.7	3.9	3.9	4.1		
Galveston, Tex.	11.3	11.9	12.2	10.7	11.5	10.9	11.5	12.7	12.8	13.2	13.1	13.0	12.9	12.7	12.6	12.3	11.4	10.6	10.7	11.2	11.1	10.7	11.8			
Grand Haven, Mich.	12.8	12.9	12.6	12.8	11.8	11.7	11.3	12.0	11.9	12.6	13.4	13.5	13.3	13.1	13.1	12.4	12.4	11.5	11.7	12.0	12.2	12.9	12.4			
Greenbay, Wis.	8.2	8.2	8.1	7.9	8.2	8.4	8.6	8.7	8.7	9.4	9.7	10.0	10.3	10.0	9.4	9.2	7.7	8.4	7.7	8.0	7.7	8.2	8.6			
Hannibal, Mo.	9.4	8.8	9.2	9.2	10.2	10.0	9.8	10.0	11.8	12.0	13.1	13.1	12.9	12.8	13.1	11.1	10.4	9.4	9.0	9.2	9.8	10.4	10.5			
Harrisburg, Pa.	7.7	7.7	7.8	7.8	8.8	7.7	8.5	8.4	9.1	9.7	10.1	10.8	11.7	11.7	10.5	10.1	9.8	9.2	9.4	8.8	7.8	7.9	9.1			
Hatteras, N. C.	15.5	15.3	15.2	15.7	15.8	15.6	15.6	14.8	15.0	15.4	15.8	15.9	15.9	16.2	16.3	15.9	15.0	14.8	15.4	15.4	14.6	14.8	15.4			
Havre, Mont.	9.8	8.4	9.3	9.0	9.0	8.8	8.7	9.4	8.8	8.4	8.8	8.7	10.3	11.0	11.6	11.0	11.2	10.3	9.3	8.7	8.4	9.0	9.4			
Helena, Mont.																										

TABLE VII.—*Average wind movement, etc.—Continued.*

Stations.	Wind Movement																								Mean.	
	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.		
Pensacola, Fla.....	9.2	9.4	8.9	9.0	9.0	8.7	8.8	8.8	9.1	9.1	9.4	9.5	10.2	10.1	10.2	10.7	9.7	8.5	7.5	7.2	7.4	8.3	8.6	9.0		
Philadelphia, Pa.....	8.6	8.2	8.0	7.7	7.3	7.2	7.5	8.9	10.4	11.7	12.2	13.6	13.4	12.2	11.8	10.2	10.3	9.8	9.4	8.4	8.5	8.3	8.7	9.7		
Phoenix, Ariz.....	2.9	3.0	3.1	3.3	3.1	3.4	3.4	3.5	3.0	2.7	2.9	3.5	4.3	4.7	4.5	4.8	3.6	3.2	2.7	2.4	1.9	2.8	2.7	3.2		
Pierre, S. Dak.....	6.0	5.0	5.4	5.7	5.4	5.0	5.7	6.3	7.1	7.6	8.5	9.8	10.7	11.0	11.3	10.6	10.1	9.0	7.7	7.1	6.7	5.9	5.7	7.6		
Pittsburg, Pa.....	7.8	7.4	7.1	7.0	6.9	6.9	6.8	7.6	8.2	8.0	8.7	9.5	9.4	9.8	8.8	7.9	7.5	7.3	7.0	6.9	6.6	6.4	7.1	7.7		
Port Angeles, Wash.....	5.1	5.6	5.6	6.0	6.1	5.7	5.8	5.8	6.0	6.0	6.4	5.7	5.0	4.7	4.7	5.6	5.8	5.4	5.8	5.4	5.0	5.2	5.3	5.6		
Port Huron, Mich.....	18.1	12.7	12.7	12.6	12.4	13.1	12.9	13.2	12.7	13.9	14.5	15.4	15.0	14.7	14.9	13.5	12.4	12.8	12.9	13.6	13.4	13.1	13.4	13.5		
Portland, Me.....	7.0	7.5	7.5	7.2	7.0	6.9	6.6	7.0	7.5	8.6	9.6	9.4	9.6	9.5	9.5	9.0	7.9	7.6	7.8	7.4	7.6	7.1	6.9	7.9		
Portland, Oreg.....	11.4	11.4	10.8	10.5	9.4	9.5	8.7	8.2	8.0	8.6	8.4	8.5	10.1	10.5	11.0	11.5	11.6	10.4	9.9	9.2	9.8	10.2	9.8	10.3	9.9	
Pueblo, Colo.....	5.6	5.4	5.6	5.9	5.6	5.6	5.9	6.4	6.7	7.0	7.8	7.6	7.3	7.9	8.3	8.8	8.5	8.1	6.8	5.7	6.0	6.8	6.0	6.8		
Raleigh, N. C.....	6.1	5.8	5.7	5.8	5.2	5.6	5.6	5.8	6.8	8.5	9.1	9.8	9.4	9.5	9.8	8.7	8.5	8.5	8.8	5.1	5.2	5.7	5.2	5.5	6.2	6.7
Rapid City, S. Dak.....	5.4	5.9	6.8	8.1	7.6	7.7	7.8	6.8	6.8	6.4	6.5	6.3	7.1	8.3	9.1	9.0	8.0	6.7	5.2	5.2	5.5	5.6	6.2	6.8		
Redbluff, Cal.....	3.2	2.9	3.3	3.9	3.7	4.0	3.8	3.5	3.7	4.1	4.6	4.3	5.1	5.2	5.0	5.1	4.8	4.6	4.5	3.8	4.0	3.7	3.5	4.1		
Rochester, N. Y.....	9.1	9.6	9.5	9.7	9.8	9.2	9.8	8.9	9.1	9.8	10.4	10.4	10.7	10.3	10.1	9.5	8.8	8.3	8.1	8.6	8.8	8.7	9.0	9.3		
Roseburg, Oreg.....	2.6	2.2	2.1	2.2	2.3	1.9	2.0	2.6	3.0	2.5	2.8	3.1	2.7	3.7	3.9	4.3	4.6	4.7	4.8	3.1	2.9	2.6	2.4	2.6	3.0	
Sacramento, Cal.....	5.9	6.6	5.9	5.8	6.2	6.0	6.1	6.3	5.7	5.5	5.6	5.9	6.5	6.5	6.8	7.2	7.1	6.7	6.1	5.2	5.8	6.3	6.4	6.1		
St. Louis, Mo.....	10.8	10.9	10.8	10.4	9.8	9.9	10.8	11.2	11.1	10.8	11.1	11.2	11.1	11.1	11.1	11.1	11.1	11.0	10.8	10.8	10.8	11.0	10.4	10.7		
St. Paul, Minn.....	6.8	6.7	6.7	7.0	7.0	7.2	6.6	6.4	7.0	7.7	7.6	8.8	8.5	8.5	8.7	7.9	7.2	6.5	6.4	6.8	6.6	6.2	6.7	7.2		
Salt Lake City, Utah.....	4.7	4.4	5.3	4.8	4.4	4.2	4.5	4.8	4.7	5.1	4.4	4.0	5.3	5.7	6.5	7.0	6.7	5.8	4.8	4.0	4.1	4.5	4.6	4.9		
San Antonio, Tex.....	6.9	6.5	7.4	7.5	7.7	8.1	8.3	8.3	8.9	9.8	10.2	10.8	10.8	11.2	11.1	10.5	10.8	9.9	8.8	8.1	8.4	8.8	7.9	8.9		
San Diego, Cal.....	3.2	3.6	3.8	3.9	3.9	4.7	3.7	4.2	4.2	4.2	2.9	2.6	3.9	6.1	8.4	9.7	10.1	9.7	8.7	6.9	4.8	2.8	3.4	3.4	5.1	
Sandusky, Ohio.....	10.1	9.6	10.8	10.5	9.9	10.4	10.1	9.7	10.5	11.3	11.9	12.5	12.6	12.8	12.0	11.2	10.2	10.5	10.2	10.7	11.0	10.7	11.0	10.9		
San Francisco, Cal.....	7.8	6.8	6.8	6.5	6.4	6.4	6.4	6.5	5.9	5.6	6.7	7.2	7.4	7.5	8.4	9.1	9.9	10.7	9.7	9.1	8.1	7.2	7.4			
San Luis Obispo, Cal.....	8.6	8.7	4.0	3.9	4.3	4.2	4.1	4.2	3.9	3.9	4.3	4.7	5.2	5.6	6.2	7.1	8.0	8.2	7.0	6.3	5.0	3.9	2.8	3.1	4.9	
Santa Fe, N. Mex.....	3.8	3.6	3.5	4.2	4.2	3.7	4.1	4.1	4.6	5.9	7.7	9.2	9.0	8.8	8.9	7.8	7.0	5.0	2.9	4.2	4.3	3.8	5.4			
Sault Ste Marie, Mich.....	10.5	10.4	10.6	10.0	10.8	11.6	10.9	11.0	11.6	11.2	11.1	11.8	12.9	13.6	13.8	13.7	13.2	12.3	11.9	12.8	11.8	11.3	11.2	11.7		
Savannah, Ga.....	6.9	7.1	7.2	7.1	7.1	6.7	6.7	6.9	7.4	8.9	9.0	9.9	9.9	10.2	10.0	10.1	9.8	9.0	7.0	7.6	7.7	8.2	8.0	7.8		
Seattle, Wash.....	7.7	7.5	7.8	7.0	6.8	6.1	6.2	6.4	6.1	6.3	6.8	6.0	6.0	6.9	6.9	7.8	8.2	7.8	7.4	6.8	6.7	7.8	7.0	6.9		
Shreveport, La.....	7.9	7.1	7.2	7.4	7.5	7.4	7.1	7.0	6.7	7.8	9.4	9.5	9.2	9.0	9.1	9.7	9.5	8.5	7.8	6.6	7.0	7.4	7.7	8.0		
Sioux City, Iowa.....	11.6	11.8	11.2	11.6	11.4	11.2	11.1	11.1	11.2	12.0	13.9	14.6	15.7	16.0	16.0	14.9	18.4	18.3	12.8	12.0	11.8	11.3	12.6			
Spokane, Wash.....	6.2	6.1	6.1	5.5	5.1	5.0	4.7	4.8	4.8	4.2	4.8	4.8	5.5	6.2	6.5	7.3	7.3	7.5	7.8	7.2	7.5	7.6	6.7	6.1		
Springfield, Ill.....	10.8	10.4	9.9	10.3	9.9	9.5	9.6	10.2	10.7	11.4	11.9	12.2	12.9	12.8	12.5	12.6	11.3	10.4	10.8	10.7	10.9	10.6	11.0			
Springfield, Mo.....	12.6	12.6	12.0	12.1	12.1	12.1	12.1	12.3	12.0	14.0	14.8	14.1	13.9	13.7	13.8	11.9	11.5	11.2	11.7	11.9	12.0	12.6				
Tacoma, Wash.....	7.7	7.8	7.4	7.8	6.5	6.2	6.4	6.6	5.7	5.8	5.8	5.7	5.6	7.0	7.7	8.8	9.1	8.8	8.0	7.4	7.5	7.7	7.1	7.1		
Tampa, Fla.....	4.5	4.6	5.0	5.4	5.0	5.8	6.1	6.1	6.4	7.9	8.5	8.7	9.1	9.0	8.6	8.3	8.7	5.8	5.6	5.1	4.9	4.8	4.0	6.3		
Tatooch Island, Wash.....	14.6	15.3	15.9	16.7	16.6	15.9	16.2	16.1	15.5	15.6	15.7	15.1	18.5	14.5	18.0	12.9	18.1	18.6	13.8	14.6	14.3	14.8	14.5	14.8		
Toledo, Ohio.....	10.7	11.0	11.4	10.8	9.9	9.9	10.4	11.4	12.0	12.2	12.9	13.7	18.4	18.8	12.5	11.9	10.5	10.5	10.4	11.1	11.2	10.9	10.7	11.4		
Vicksburg, Miss.....	8.0	7.8	7.4	7.7	7.7	7.2	7.1	7.4	7.1	8.1	8.6	8.4	8.5	8.0	7.9	7.0	6.8	6.1	6.7	7.2	7.8	7.6	7.5			
Vineyard Haven, Mass.....	12.0	11.5	10.9	10.9	10.8	10.4	10.6	10.9	11.4	12.0	11.8	11.6	11.4	11.8	10.8	9.7	10.3	10.2	10.4	10.9	11.7	12.1	11.0			
Walla Walla, Wash.....	5.9	6.1	5.9	5.6	5.5	6.0	5.9	6.1	6.0	5.4	5.9	6.5	7.7	8.4	8.8	8.4	7.6	6.4	5.2	5.4	6.7	6.7	6.5			
Washington, D. C.....	5.8	5.5	5.0	4.6	4.9	5.3	5.7	5.9	8.2	9.8	9.5	10.1	9.6	10.8	10.6	10.1	8.2	6.5	6.3	7.1	6.9	5.9	5.8	7.2		
Wichita, Kans.....	9.6	9.8	9.5	9.5	9.4	9.5	9.3	9.0	8.9	10.0	11.5	12.3	12.8	12.0	12.5	12.7	12.2	11.3	9.8	9.7	10.2	9.4	9.8	10.0	10.4	
Williston, N. Dak.....	6.8	7.2	6.5	7.1	7.5	7.2	7.6	8.0	7.2	6.7	6.6	7.6	9.2	10.0	10.3	10.0	10.5	9.6	7.5	6.4	6.7	6.6	7.8			
Wilmington, N. C.....	7.7	8.1	7.8	7.3	6.8	6.9	7.3	7.5	8.3	8.9	10.4	11.8	11.8	11.7	11.3	11.2	8.9	7.4	7.9	7.6	7.8	7.4	8.6			
Woods Hole, Mass.....	21.2	20.1	20.1	20.0	20.0	19.8	18.9	18.8	19.6	19.1	17.8	18.5	18.4	18.1	18.0	18.5	17.6	18.5	18.6	20.1	20.3	19.1				
Yankton, S. Dak.....	6.8	7.2	7.1	7.2	6.9	7.2	7.3	7.6	7.4	7.8	8.2	9.7	11.1	11.8	11.9	11.8	10.8	9.0	7.9	7.8	8.3	7.8	7.7	6.9	8.4	

TABLE VIII.—Resultant winds from observations at 8 a. m. and 8 p. m., daily, during the month of November, 1897.

Stations.	Component direction from—				Resultant.		Stations.	Component direction from—				Resultant.	
	N.	S.	E.	W.	Direction from—	Dura-		N.	S.	E.	W.	Direction from—	Dura-
	Hours.	Hours.	Hours.	Hours.	°	Hours.		Hours.	Hours.	Hours.	Hours.	°	Hours.
<i>New England.</i>													
Eastport, Me.	20	13	10	31	n. 72 w.	22	Upper Lake Region—Cont'd.	Hours.	Hours.	Hours.	Hours.	°	Hours.
Portland, Me.	25	12	3	26	n. 61 w.	26	Greenbay, Wis.	17	22	5	25	s. 76 w.	21
Northfield, Vt.	27	27	4	8	w.	4	Duluth, Minn.	20	9	10	32	n. 64 w.	25
Boston, Mass.	16	13	5	36	n. 84 w.	31	<i>North Dakota.</i>	25	17	19	13	n. 37 e.	10
Nantucket, Mass.	25	21	6	23	n. 77 w.	18	Moorhead, Minn.	27	8	17	23	n. 18 w.	20
Woods Hole, Mass.*	5	10	7	15	s. 58 w.	9	Bismarck, N. Dak.	30	11	7	18	n. 30 w.	23
Block Island, R. I.	22	16	13	29	n. 69 w.	17	Williston, N. Dak.						
New Haven, Conn.	27	7	12	27	n. 37 w.	25	<i>Upper Mississippi Valley.</i>						
<i>Middle Atlantic States.</i>							St. Paul, Minn.	22	17	11	23	n. 67 w.	18
Albany, N. Y.	18	22	7	21	s. 74 w.	15	La Crosse, Wis. †	14	12	6	8	n. 88 w.	2
Binghamton, N. Y. †	10	8	2	14	n. 81 w.	12	Davenport, Iowa.	17	16	15	23	n. 31 w.	6
New York, N. Y.	20	16	13	28	n. 75 w.	16	Des Moines, Iowa.	22	17	17	20	s. 61 w.	12
Harrisburg, Pa.	9	13	21	27	s. 56 w.	7	Dubuque, Iowa.	18	24	11	22	s. 78 w.	14
Philadelphia, Pa.	20	18	12	25	n. 81 w.	13	Keokuk, Iowa.	20	23	10	24	s. 10 w.	11
Atlantic City, N. J.	17	18	4	34	s. 88 w.	30	Cairo, Ill.	17	23	9	11	s. 48 w.	15
Baltimore, Md.	15	14	16	29	n. 88 w.	18	Springfield, Ill.	18	23	7	18	n. 80 w.	6
Washington, D. C.	19	19	9	23	w.	14	Hannibal, Mo. †	10	9	6	12	s. 32 w.	13
Lynchburg, Va.	16	23	8	31	s. 73 w.	24	St. Louis, Mo.	16	27	8	15		
Norfolk, Va.	21	22	14	19	s. 79 w.	5	<i>Missouri Valley.</i>						
<i>South Atlantic States.</i>							Columbia, Mo.*	8	11	6	9	s. 45 w.	4
Charlotte, N. C.	14	26	19	13	s. 27 e.	13	Kansas City, Mo.	19	24	13	18	s. 45 w.	7
Hatteras, N. C.	26	18	7	23	n. 63 w.	18	Springfield, Mo.	17	30	16	10	s. 25 e.	14
Kittyhawk, N. C.							Lincoln, Nebr.	25	21	13	13	n.	4
Raleigh, N. C.	21	21	10	20	w.	10	Omaha, Nebr.	23	22	10	15	n. 79 w.	5
Wilmington, N. C.	20	23	9	21	s. 76 w.	12	Sioux City, Iowa.	13	11	8	5	s. 56 e.	4
Charleston, S. C.	19	20	14	19	s. 79 w.	5	Pierre, S. Dak.	23	18	20	15	n. 45 e.	7
Augusta, Ga.	18	18	10	26	w.	16	Huron, S. Dak.	24	19	15	15	n. 79 w.	5
Savannah, Ga.	20	23	12	18	s. 63 w.	7	Yankton, S. Dak. †	9	10	6	10	s. 76 w.	4
Jacksonville, Fla.	23	11	19	19	n.	12	<i>Northern Slope.</i>						
<i>Florida Peninsula.</i>							Havre, Mont.	23	14	17	24	n. 41 w.	11
Jupiter, Fla.	19	5	30	15	n. 65 e.	33	Miles City, Mont.	24	20	12	16	s. 45 w.	6
Key West, Fla.	23	1	42	3	n. 51 e.	51	Helena, Mont.	17	26	2	24	s. 74 w.	33
Tampa, Fla.	26	5	17	13	n. 7 e.	31	Rapid City, S. Dak.	25	6	13	29	n. 40 w.	25
<i>Eastern Gulf States.</i>							Cheyenne, Wyo.	20	14	3	35	n. 79 w.	33
Atlanta, Ga.	19	16	15	25	n. 73 w.	10	Lander, Wyo. †	12	29	18	20	s. 7 w.	17
Pensacola, Fla.	26	13	24	11	n. 45 e.	18	North Platte, Nebr.	17	15	13	23	n. 82 w.	15
Mobile, Ala.	20	17	14	14	n.	13	<i>Middle Slope.</i>						
Montgomery, Ala.	23	15	20	14	n. 41 e.	9	Denver, Colo.	16	33	10	10	s.	17
Vicksburg, Miss.	16	34	26	10	s. 42 e.	24	Pueblo, Colo.	15	11	18	27	n. 66 w.	10
New Orleans, La.	22	18	27	5	n. 80 e.	22	Concordia, Kans.	20	27	9	11	s. 16 w.	7
<i>Western Gulf States.</i>							Dodge City, Kans.	21	23	8	19	s. 80 w.	11
Shreveport, La.	19	25	22	13	s. 56 e.	11	Wichita, Kans.	23	31	8	8	s. 13 w.	9
Fort Smith, Ark.	13	11	30	14	s. 53 e.	16	Oklahoma, Okla.	23	31	7	9	s. 18 w.	9
Little Rock, Ark.	19	27	13	17	s. 27 w.	9	<i>Southern Slope.</i>						
Corpus Christi, Tex.	32	15	24	5	n. 48 e.	29	Abilene, Tex.	18	32	9	13	s. 16 w.	15
Galveston, Tex.	23	20	28	6	n. 88 e.	17	Amarillo, Tex.	14	33	2	16	s. 38 w.	23
Palestine, Tex.	27	24	13	7	n. 63 e.	7	<i>Southern Plateau.</i>						
San Antonio, Tex.	28	17	23	6	n. 56 e.	19	El Paso, Tex.	20	5	23	26	n. 11 w.	15
<i>Ohio Valley and Tennessee.</i>							Santa Fe, N. Mex.	19	20	19	11	s. 84 e.	9
Chattanooga, Tenn.	16	28	9	19	s. 40 w.	16	Phoenix, Ariz.	17	8	33	16	n. 63 e.	19
Knoxville, Tenn.	20	27	10	21	s. 58 w.	13	Yuma, Ariz.	38	4	16	12	n. 7 e.	34
Memphis, Tenn.	15	26	16	13	s. 15 e.	11	<i>Middle Plateau.</i>						
Nashville, Tenn.	15	25	14	18	s. 22 w.	11	Carson City, Nev.	15	20	7	28	s. 77 w.	22
Lexington, Ky.	11	27	13	19	s. 21 w.	17	Winnemucca, Nev.	17	18	9	22	n. 73 w.	14
Louisville, Ky.	14	30	14	14	s.	16	Salt Lake City, Utah.	17	21	7	20	s. 73 w.	14
Indianapolis, Ind.	20	18	7	19	n. 81 w.	12	<i>Northern Plateau.</i>						
Cincinnati, Ohio.	15	24	17	20	s. 18 w.	10	Baker City, Oreg.	16	28	11	19	s. 34 w.	14
Columbus, Ohio.	12	24	13	26	s. 47 w.	18	Idaho Falls, Idaho.	10	43	4	6	s. 3 w.	33
Pittsburg, Pa.	3	31	8	27	s. 38 w.	35	Spokane, Wash.	15	23	15	18	s. 18 w.	13
Parkersburg, W. Va.	12	25	14	31	s. 28 w.	15	Walla Walla, Wash.	8	45	7	11	s. 6 w.	40
<i>Lower Lake Region.</i>							Fort Canby, Wash.	12	16	25	16	s. 66 e.	10
Buffalo, N. Y.	12	21	8	30	s. 68 w.	24	Port Angeles, Wash. *	2	10	9	15	s. 37 w.	10
Oswego, N. Y.	16	29	11	20	s. 35 w.	16	Seattle, Wash.	12	32	2	28	s. 48 e.	29
Rochester, N. Y.	10	27	8	30	s. 52 w.	28	Tacoma, Wash.	10	36	15	16	s. 3 w.	37
Erie, Pa.	17	29	6	22	s. 53 w.	20	Tatoosh Island, Wash.	8	21	19	20	s. 4 w.	13
Cleveland, Ohio.	15	30	8	20	s. 39 w.	19	Portland, Oreg.	10	30	15	17	s. 6 w.	20
Sandusky, Ohio.	17	24	4	29	s. 74 w.	26	Roseburg, Oreg.	11	30	12	17	s. 15 w.	20
Toledo, Ohio.	11	23	8	31	s. 64 w.	26	<i>Middle Pacific Coast Region.</i>						
Detroit, Mich.	9	23	7	29	s. 58 w.	26	Eureka, Cal.	16	23	22	17	s. 40 e.	8
<i>Upper Lake Region.</i>							Redbluff, Cal.	33	9	11	18	n. 16 w.	25
Alpena, Mich.	17	19	6	31	s. 85 w.	25	Sacramento, Cal.	24	22	19	13	n. 72 e.	6
Grand Haven, Mich.	25	17	17	19	n. 14 w.	8	San Francisco, Cal.	23	8	2	36	n. 66 w.	37
Marquette, Mich.	23	13	7	30	n. 67 w.	25	<i>South Pacific Coast Region.</i>						
Port Huron, Mich.	10	27	11	25	s. 39 w.	23	Fresno, Cal.	30	7	10	33	n. 45 w.	32
Sault Ste. Marie, Mich.	19	11	22	20	n. 14 e.	8	Los Angeles, Cal.	26	1	16	28	n. 26 w.	28
Chicago, Ill.	19	24	8	20	s. 67 w.	18	San Diego, Cal.	36	2	17	20	n. 5 w.	34
Milwaukee, Wis.	19	20	7	25	s. 87 w.	18	San Luis Obispo, Cal.	42	6	8	16	n. 5 w.	36

* From observations at 8 p. m. only.

† From observations at 8 a. m. only.

TABLE IX.—*Thunderstorms and auroras, November, 1897.*

States.	No. of stations.																														Total.				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Alabama	53	T.	A.																														0	0	T.
Arizona	52	T.	A.																													0	0	A.	
Arkansas	61	T.	A.																													36	8	T.	
California	181	T.	A.																													11	4	T.	
Colorado	75	T.	A.																													2	0	A.	
Connecticut	14	T.	A.																													5	1	A.	
Delaware	3	T.	A.	1																												1	1	A.	
Dist. of Columbia	4	T.	A.																													0	0	A.	
Florida	45	T.	A.																													2	0	A.	
Georgia	62	T.	A.	1																												5	3	A.	
Idaho	30	T.	A.																													0	0	T.	
Illinois	93	T.	A.	1																												83	14	A.	
Indiana	54	T.	A.																													1	1	A.	
Indian Territory	7	T.	A.																													2	1	A.	
Iowa	123	T.	A.																													9	1	A.	
Kansas	85	T.	A.	1																												7	5	A.	
Kentucky	52	T.	A.	4	1	1	1																								14	0	T.		
Louisiana	50	T.	A.																												10	0	A.		
Maine	14	T.	A.																												2	4	A.		
Maryland	35	T.	A.																												1	1	A.		
Massachusetts	24	T.	A.																												4	0	A.		
Michigan	112	T.	A.																												5	2	A.		
Minnesota	69	T.	A.																												0	0	T.		
Mississippi	46	T.	A.																												2	2	A.		
Missouri	95	T.	A.		1	1	2	2	13	8																				50	12	A.			
Montana	37	T.	A.																												6	6	A.		
Nebraska	143	T.	A.																												3	2	T.		
Nevada	48	T.	A.																												2	3	A.		
New Hampshire	14	T.	A.																												5	0	T.		
New Jersey	55	T.	A.																												11	4	T.		
New Mexico	39	T.	A.																												0	0	T.		
New York	103	T.	A.	3																											19	4	A.		
North Carolina	59	T.	A.		1																									3	2	A.			
North Dakota	46	T.	A.																												0	0	A.		
Ohio	135	T.	A.	6	4	1	1		2	13	13																		56	12	A.				
Oklahoma	23	T.	A.																											6	2	T.			
Oregon	62	T.	A.						2	3	1																		9	6	T.				
Pennsylvania	105	T.	A.		12	1																								32	8	A.			
Rhode Island	5	T.	A.																											1	1	A.			
South Carolina	43	T.	A.																											4	0	A.			
South Dakota	44	T.	A.																											0	0	T.			
Tennessee	66	T.	A.																											18	7	A.			
Texas	85	T.	A.																											5	4	T.			
Utah	41	T.	A.																											0	0	A.			
Vermont	13	T.	A.																											0	0	A.			
Virginia	49	T.	A.	1																										2	2	A.			
Washington	50	T.	A.																											8	4	T.			
West Virginia	35	T.	A.	1	2																								5	4	T.				
Wisconsin	61	T.	A.																											1	2	A.			
Wyoming	14	T.	A.																											1	0	A.			
Sums	2,810	T.	A.	18	23	2	6	15	10	38	64	59	0	19	2	5	0	62	41	37	4	1	2	1	0	4	0	6	15	58	1	7	5	0	T.
				1	4	3	3	1	2	0	1	1	0	19	0	1	0	3	1	3	8	1	2	2	0	2	0	8	2	5	2	1	0	A.	

TABLE X.—*Hourly sunshine as deduced from sunshine recorders, November, 1897.*

Stations.	Instrument.	Percentages for each hour of local mean time ending with the respective hour.																Hours of sunshine.			
		A. M.								P. M.								Total.		Personal estimate.	
		5	6	7	8	9	10	11	Noon	1	2	3	4	5	6	7	8	Actual.	Possible.		
Albany, N. Y.	T.	5	7	21	43	50	47	40	41	45	30	19	67	Hours.	Hours.					85	92
Atlanta, Ga.	T.	59	60	57	58	71	78	70	65	61	62	64	67	292.3	313.3	24	65			59	65
Atlantic City, N. J.	P.	44	54	54	65	63	68	66	58	55	58	51	51	301.5	301.5					59	44
Baltimore, Md.	T.	23	35	55	64	67	75	70	64	55	48	23	13	166.8	201.5	55	55			55	48
Binghamton, N. Y.	T.	17	23	32	38	37	41	42	41	35	23	13	95.2	294.9	294.9	22	22			32	24
Bismarck, N. Dak.	P.	58	40	46	56	62	70	70	67	68	67	70	70	172.7	281.0	61	61			51	51
Boston, Mass.	T.	39	31	35	47	47	48	48	43	41	34	25	25	118.6	294.9	40	40			32	32
Buffalo, N. Y.	T.	13	8	19	30	34	33	34	30	28	23	8	7	67.3	292.8	23	12			12	12
Charleston, S. C.	T.	47	47	55	76	80	76	75	72	65	51	51	50	201.1	314.0	64	62			62	62
Chattanooga, Tenn.	T.	51	45	45	54	61	66	61	66	59	55	50	50	173.9	310.1	56	53			53	53
Cheyenne, Wyo.	P.	48	41	47	62	62	71	78	78	64	63	59	59	182.0	297.3	61	52			52	52
Chicago, Ill.	T.	15	10	20	35	39	42	48	43	38	33	21	21	94.0	294.9	32	31			31	31
Cincinnati, Ohio	T.	32	39	49	48	48	46	46	46	42	37	38	38	138.6	301.5	44	43			43	43
Cleveland, Ohio	T.	8	11	14	19	21	28	23	23	20	19	22	22	58.1	294.9	20	16			16	16
Columbus, Ohio	T.	17	17	20	28	31	31	33	31	29	19	18	18	76.5	293.7	26	27			27	27
Denver, Colo.	P.	65	50	68	62	69	71	66	78	65	70	68	68	196.9	299.7	66	47			47	47
Des Moines, Iowa	T.	43	53	54	57	56	57	58	59	59	56	56	56	162.5	294.9	55	55			55	55
Detroit, Mich.	T.	15	13	23	34	37	36	35	27	22	29	29	15	79.8	294.9	27	22			22	22
Dodge City, Kans.	P.	54	64	69	81	79	73	73	76	72	68	100	100	223.9	304.0	74	66			66	45
Dubuque, Iowa	T.	86	27	34	39	49	49	55	50	48	38	34	34	125.3	294.9	42	42			45	45
Eastport, Me.	P.	84	30	37	46	44	39	34	39	39	29	31	31	105.4	287.2	37	36			36	36
Erie, Pa.	T.	8	6	13	20	26	29	25	25	16	11	10	7	48.5	294.9	16	26			26	26
Eureka, Cal.	P.	10	11	20	24	42	42	39	42	41	37	30	30	99.4	297.3	33	33			33	33
Fresno, Cal.	T.	61	55	73	82	84	84	84	89	90	80	88	88	238.4	305.7	78	63			63	63
Galveston, Tex.	P.	42	56	67	72	73	69	68	70	73	70	53	50	210.9	321.7	66	61			61	61
Harrisburg, Pa.	T.	46	30	31	43	55	68	73	62	46	28	25	25	139.9	299.7	47	39			39	39
Helena, Mont.	T.	29	24	34	35	39	34	34	37	39	22	22	22	91.9	281.0	33	29			29	29
Huron, S. Dak.	T.	6	14	21	47	59	68	75	67	56	56	56	56	136.4	289.7	47	45			45	45
Idaho Falls, Idaho	T.	44	81	35	32	40	39	34	33	32	28	28	28	95.5	292.3	33	30			30	30
Indianapolis, Ind.	T.	42	44	45	45	46	43	49	44	36	32	32	30	124.4	299.7	42	33			33	33
Jacksonville, Fla.	T.	48	49	55	66	75	74	74	69	67	53	51	60	201.8	319.7	68	48			48	48
Kansas City, Mo.	P.	48	47	50	57	68	63	62	57	50	39	39	39	160.7	301.5	53	52			52	52
Key West, Fla.	T.	56	53	60	77	84	86	85	85	76	76	68	68	229.2	328.2	73	61			61	61
Knoxville, Tenn.	T.	24	26	47	68	74	74	76	71	71	67	55	50	187.7	308.3	61	58			58	58
Little Rock, Ark.	T.	56	59	67	74	76	88	87	82	80	68	60	60	227.3	310.1	73	54			54	54
Los Angeles, Cal.	P.	79	78	91	86	88	93	98	98	98	98	98	98	273.6	312.2	88	81			81	81
Louisville, Ky.	T.	43	51	55	58	55	57	62	62	54	51	44	0	164.8	304.0	54	40			40	40
Minneapolis, Minn.	T.	28	23	29	34	32	45	43	38	27	18	10	10	87.1	287.2	50	35			35	35
Nashville, Tenn.	T.	51	49	55	54	59	59	59	57	54	52	49	20	168.2	308.3	55	53			53	53
New Orleans, La.	T.	35	37	63	69	70	76	73	69	58	44	32	32	188.5	319.7	57	53			53	53
New York, N. Y.	T.	18	27	50	53	56	68	61	63	58	40	35	35	149.2	297.3	50	34			34	34
Northfield, Vt.	T.	19	26	29	35	34	33	33	28	22	17	18	18	79.8	299.7	27	20			20	20
Omaha, Nebr.	P.	26	27	30	40	46	48	45	41	33	20	11	11	108.2	301.5	81	81			81	81
Parkersburg, W. Va.	T.	31	30	43	53	55	55	55	55	52	35	36	36	141.0	299.7	47	36			36	36
Philadelphia, Pa.	T.	77	84	92	97	96	98	97	92	91	88	81	82	225.4	314.0	91	76			76	76
Phoenix, Ariz.	T.	3	20	29	40	45	43	44	40	33	24	24	24	100.0	297.3	84	29			29	29
Pittsburg, Pa.	T.	3	23	42	48	52	52	54	52	49	42	29	29	122.0	299.7	42	34			34	34
Portland, Mo.	T.	0	0	8	18	31	37	37	37	37	31	10	9	68.9	284.1	23	15			15	15
Portland, Oreg.	P.	0	0	4	9	18	10	21	23	14	8	9	9	88.4	284.1	12	12			12	12
Raleigh, N. C.	T.	46	43	58	70	80	81	85	81	71	68	49	50	206.2	308.8	67	56			56	56
Rochester, N. Y.	T.	9	4	16	26	34	40	24	26	16	18	11	11	62.4	292.3	21	20			20	20
St. Louis, Mo.	T.	22	31	52	58	68	69	68	64	50	49	42	42	157.0	301.5	52	46			46	46
St. Paul, Minn.	P.	21	26	31	40	46	46	45	45	47	37	36	36	119.9	297.2	40	37			37	37
Salt Lake City, Utah	P.	42	33	36	42	52	59	50	47	47	39	39	39	138.1	297.8	45	40			40	40
San Diego, Cal.	P.	68	68	78	90	91	98	92	89	90	86	78	68	266.3	314.0	85	88			88	88
San Francisco, Cal.	T.	14	20	50	66	71	80	77	74	70	60	59	0	178.9	304.0	59	44			44	44
Santa Fe, N. Mex.	P.	70	76	84	89	84	78	86	88	79	80	70	50	249.6	308.8	81	70			70	70
Savannah, Ga.	P.	53	55	64	70	73	73	73	71	64	64	58	58	207.6	315.9	66	58			58	58
Seattle, Wash.	T.	0	0	0	4	11	13	7	8	1	0	0	0	11.7	278.0	4	12			12	12
Spokane, Wash.	T.	0	2	6	14	21	24	28	17	16	7	9	9	39.7	278.0	14	12			12	12
Tacoma, Wash.	T.	12	6	6	15	24	23	21	20	11	14	18	18	44.0	281.0	16	10			10	10
Tampa, Fla.	T.	76	69	69	80	74	72	62	67	64	54	65	65	219.6	328.5	66	65			65	65
Vicksburg, Miss.	T.	44	46	61	62	70	72	75	81	77	74	53	42	206.0	315.9	66	55			55	49
Washington, D. C.	P.	49	47	55	60	58	61	54	57	54	53	48	48	164.6	301.5	55	49			49	49
Wilmington, N. C.	T.	46	54	66	73	79	86	85	77	72	54	54	50	222.5	312.2	72	65			65	65
Yank																					

TABLE XI.—Accumulated amounts of precipitation for each 5 minutes, for storms in which the rate of fall equaled or exceeded 0.25 in any 5 minutes, or 0.75 in 1 hour during November, 1897, at all stations furnished with self-registering gauges.

Station.	Date.	Total duration.		Total amt. of precip.	Excessive rate.		Amount be- fore excess- ive began.	Depths of precipitation (in inches) during periods of time as indicated.													
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Albany, N. Y.	1 1-2	2	3	4	5	6														0.18	
Atlanta, Ga.	26			0.98															0.37		
Atlantic City, N. J.	1-2			1.61															0.45		
Baltimore, Md.	1-2			1.67															0.17		
Binghamton, N. Y.	1-2			0.86															0.10		
Bismarck, N. Dak. *																			0.30		
Boston, Mass.	11-12			1.87																	
Buffalo, N. Y. *																					
Cairo, Ill.	15-16	11.50 p.m.	5.30 a.m.	1.73	12.15 a.m.	1.45 a.m.	T.	0.08	0.11	0.16	0.20	0.30	0.41	0.47	0.55	0.58	0.67	0.80	0.94	1.16	1.25
Charleston, S. C.	1			0.14															0.10		
Chicago, Ill.	8-9			0.69															0.16		
Cincinnati, Ohio.	26			0.84															0.62		
Cleveland, Ohio.	14			0.53															0.09		
Columbia, Mo.	6-7			0.76															0.40		
Columbus, Ohio.	7-8			1.06															0.27		
Denver, Colo. *																					
Des Moines, Iowa.	25-26			0.17															0.04		
Detroit, Mich.	8-9			1.38															0.38		
Dodge City, Kans.	4			0.08															0.08		
Duluth, Minn. *																					
Eastport, Me.	9			1.06															0.50		
Erie, Pa.	8-9			0.67															0.22		
Galveston, Tex.	10			0.56															0.34		
Harrisburg, Pa.	1-2			2.10															0.18		
Hatteras, N. C.	2			0.23															0.16		
Huron, S. Dak. *																					
Idaho Falls, Idaho.																					
Indianapolis, Ind.	16			1.29															0.64		
Jacksonville, Fla.	1			0.94															0.40		
Jupiter, Fla.	27	4.00 a.m.	8.30 a.m.	1.43	6.45 a.m.	7.20 a.m.	0.10	0.25	0.45	0.58	0.76	0.92	1.09	1.20	1.01	1.18	1.33	1.66			
Do.	30	12.50 p.m.	9.30 p.m.	3.06	4.50 p.m.	5.50 p.m.	0.74	0.06	0.12	0.16	0.23	0.38	0.64	0.85	1.01				0.41		
Kansas City, Mo.	6-7			0.71																	
Key West, Fla.	18-19	8.42 p.m.	D. N.	0.92	8.52 p.m.	9.17 p.m.	0.05	0.14	0.29	0.45	0.55	0.65									
Knoxville, Tenn.	8-9			0.65															0.05		
Lincoln, Nebr.	8			0.19															0.29		
Little Rock, Ark.	25			1.13																	
Los Angeles, Cal.	24			0.01																	
Louisville, Ky.	8	12.08 p.m.	7.25 p.m.	0.86	5.39 p.m.	5.50 p.m.	0.38	0.20	0.45	0.47	0.49										
Memphis, Tenn.	16	1.35 a.m.	7.10 a.m.	1.12	1.35 a.m.	2.00 a.m.	0.00	0.15	0.29	0.40	0.51	0.55	0.58	0.61					0.10		
Milwaukee, Wis.	14			0.40															0.21		
Montgomery, Ala.	11			0.43															0.25		
Nantucket, Mass.	1-2			1.03															0.22		
Nashville, Tenn.	8			0.59																	
New Orleans, La.	9	5.00 a.m.	5.55 a.m.	0.93	5.05 a.m.	5.30 a.m.	0.01	0.09	0.31	0.56	0.81	0.90							0.48		
New York, N. Y.	1-2			2.38															0.47		
Norfolk, Va.	23			0.85															0.15		
Northfield, Vt.	1-2			2.18															0.80		
Oklahoma, Okla.	14			0.58																	
Omaha, Nebr. *																					
Parkersburg, W. Va.	26			0.66															0.30		
Philadelphia, Pa.	1-2			1.73															0.27		
Pittsburg, Pa.	8			0.70															0.18		
Portland, Me.	27			0.64															0.49		
Portland, Oreg.	18-19			3.44															0.38		
Raleigh, N. C.	26-27			0.87															0.58		
Rochester, N. Y.	9			0.41															0.17		
St. Louis, Mo.	15-16	6.08 p.m.	D. N.	1.39	7.11 p.m.	7.22 p.m.	0.05	0.20	0.33	0.37	0.39	0.44							0.04		
St. Paul, Minn.	25-26			0.27															0.14		
Salt Lake City, Utah.	23-24			0.58																	
San Diego, Cal.	24			0.03																	
San Francisco, Cal.	23-23			0.43															0.17		
Savannah, Ga.	27			0.37															0.37		
Seattle, Wash.	16-18			3.49															0.24		
Spokane, Wash. *																					
Tampa, Fla.	1			0.55													0.50				
Vicksburg, Miss.	16			0.44															0.31		
Washington, D. C.	26-27			0.73															0.31		
Wilmington, N. C.	1-2			0.73															0.58		
Yankton, S. Dak. *																					

* Record incomplete.

TABLE XII.—*Excessive precipitation, by stations, for November, 1897.*

Stations.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.		
		Amt.	Day.	Amt.	Time.	Day.
<i>Alabama.</i>						
Alco	Inches.	Inches.	1	Ins.	h.m.	
Scottsboro		3.90				
		3.75	18-19			
<i>California.</i>						
Crescent City	10.45	2.81	23			
Edmonton		2.78	23			
Grass Valley		2.50	19-20			
Greenville		3.49	22-23			
Do.		3.91	20			
Laporte		3.28	23			
Do.		2.92	22-23			
Malakoff Mine		3.78	22			
North San Juan		2.75	19-20			
Quincy	Connecticut.					
Bridgeport		3.90	1-2			
Middletown		2.73	1-2			
New Haven		3.03	1-2			
Norwalk		2.80	1-2			
Voluntown		2.96	1-2			
<i>Delaware.</i>						
Newark	Florida.	8.02	1-2			
Jupiter		4.00	*	1.30	1 00	27
Do.				2.20	2 00	30
Merritts Island		5.08	25			
Milton		2.70	1			
New Smyrna	Idaho.	2.60	17			
Lakeview		2.61	19			
Murray	Illinois.	10.98				
Kankakee	Indiana.			1-20	1 00	14
Franklin		2.50	7			
Jasper		2.50	1			
Shelbyville	Kentucky.	2.73	7			
Blandville	Louisiana.	2.77	1			
Baton Rouge		2.79	28			
Donaldsonville		4.40	28			
Emille		2.98	28			
Grand Coteau		3.32	28			
Jeanerette		2.83	28			
Melville		2.50	28-29			
Opelousas		2.58	28			
Paincourtville		2.62	28			
Rayne		4.10	28			
Shellbeach		3.02	28-29			
Sugar Ex Station		2.75	28			
Wallace		2.82	28			
White Hall	Maine.	4.60	28			
Cornish	Maryland.	3.88	1-2			
Bachmans Valley		4.42	1-2			
Darlington		3.05	1			
Fallston		2.58	1-2			
Mt. St. Mary's College		2.59	1-2			
New Market		3.19	1-2			
Port Deposit		3.35	1-2			
Taneytown		3.47	1-2			
Westminster		4.36	1-2			
Woodstock	Massachusetts.	3.30	1-2			
Fair River		3.67	1-2			
Hyannis		4.73	1-2			
Middleboro		2.76	1-2			
New Bedford		5.80	1-2			
Woods Hole		4.19	1-2			
Worcester	New Hampshire.	2.73	1-2			
Newton	New Jersey.	3.04	1-2			
Charlotteburg		2.55	1-2			
Chester		3.30	1-2			
Sergeantsville	New York.	2.75	1-2			
Middletown		2.92	1-2			
North Lake		3.55	26			
Palermo		2.75	30			
Setauket		3.08	1-2			
Wappingers Falls	North Carolina.	2.84	1-2			
Flat Rock		3.15	1			
Greenville		2.50	29			
Lynn		2.50	1			

TABLE XII.—*Excessive precipitation—Continued.*

Stations.	Monthly rainfall 10 inches, or more.	Rainfall 2.50 inches, or more, in 24 hours.		Rainfall of 1 inch, or more, in one hour.	
		Amt.	Day.	Amt.	Day.
<i>North Carolina—Continued.</i>					
Salem	Inches.	Inches.	1	Ins.	h.m.
Saxon		2.53			
		2.60	25-26		
<i>Ohio.</i>					
Elyria		2.78	1-2		
Oberlin		3.34	1-2		
Portsmouth		3.18	7-8		
Rosewood		3.23	1-2		
Vermillion		3.91	1-2		
Waynesville		2.88	1-2		
<i>Oregon.</i>					
Albany		12.07	2.55	18	
Astoria		13.36	3.58	28-29	
Aurora (near)		11.14			
Bandon		16.98	4.10	19	
Bay City		28.00	2.86	9	
Do.		3.05	18		
Do.		2.52	21		
Do.		3.52	29		
Cascade Locks		19.24			
Corvallis		11.66	3.08	18	
Falls City		20.54	8.23	19-20	
Fairview		15.21	2.82	19	
Forest Grove		18.74	5.20	17-18	
Gardiner		18.84	4.40	19	
Glenora		38.91	10.17	17-18	
Do.		4.50	29		
Government Camp		18.76			
Hood River (near)		10.64			
Langlois		20.90	2.75	18	
Do.		4.15	19		
McMinnville		15.38	4.91	19	
Monroe		16.61	3.95	19	
Mount Angel		13.89	3.36	18	
Nehalem		20.33	7.99	9-10	
Do.		2.52	18		
Newberg		13.87	5.27	18-19	
Newport		17.76	2.50	10	
Do.		3.00	19		
Portland		11.65	4.46	17-19	
Salem		11.07	3.11	19	
Stafford		14.62	3.45	19	
Toledo		13.15	9.15	17	
Vernonia	Pennsylvania.	14.18	2.95	17	
Aquednut				8.95	1-2
Coatesville				2.50	1-2
Coopersburg				3.50	1-2
East Mauch Chunk				3.38	1-2
Hamburg				3.76	1-2
Pottstown				3.50	1-2
Shawmont				3.46	1-2
Swarthmore				3.90	1-2
Swiftwater				3.00	1
<i>Rhode Island.</i>					
Block Island				5.62	1-8
Kingston				5.65	1-2
Narragansett Pier				3.00	1-2
Providence				2.91	1-2
Hickory Withe	Tennessee.			2.80	*
Aberdeen	Washington.			16.91	
Ashford				19.19	8.00
Cascade Tunnel				6.74	17-18
Chehalis				11.68	
Clearwater				23.85	4.00
Do.				6.92	17-18
Ellensburg (near)				3.00	23
Fort Canby				14.90	
Grandmound				18.18	3.77
Lacenter				18.78	
Lapush				14.26	
Mayfield				14.37	
Northbend				6.14	18-19
Olympia				18.01	2.82
Pysht				14.37	6.27
Seattle				2.66	17-18
Southbend				18.68	2.90
Stampede				18.15	
Tacoma				12.31	
Union City				18.41	8.45
Vashon				12.35	3.00
Point Pleasant	West Virginia.			2.52	8-9

*November 30-December 1.

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